DVMC-DA2

SERVICE MANUAL

US Model
Canadian Model

SPECIFICATIONS

Power requirements
DC IN 6V jack accepts the AC-MZ60A AC power adapter (supplied), AC 120 V, 60 Hz
Power consumption
AC 120 V, 60 Hz, 5.1 W (max., AC power adapter)
Operating temperature
10°C to 35°C (50°F to 95°F)
Operating humidity
40 % to 80 %
Storage temperature
–20°C to 60°C (–4°F to 140°F)
Storage humidity
20 % to 80 %
Dimensions (approx.)
124 × 44 × 90.5 mm (5 × 1 3/4 × 3 5/8 inches)
(w/h/d, excluding projections)
Mass (approx.)
300 g (10 oz) (unit only)

Input/output connector
S VIDEO IN: Mini DIN 4-pin (1)
S VIDEO OUT: Mini DIN 4-pin (1)
VIDEO IN: RCA pin (1)
VIDEO OUT: RCA pin (1)
AUDIO IN: RCA pin (2): L, R
AUDIO OUT: RCA pin (2): L, R
DV IN/OUT : 4-pin S100 (100 Mbps) (1)
LANC : Stereo mini-minijack (1)
Supplied accessories
AC power adapter (AC-MZ60A)
DV connecting cable
AV connecting cable
S VIDEO connecting cable
LANC connecting cable
Operating instructions
Warranty card
Important safeguard

Design and specifications are subject to change without notice.

MC-Service

MEDIA CONVERTER

SONY

9-928-146-11

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SECTION 1
GENERAL

This section is extracted from instruction manual (3-868-211-11).

Overview

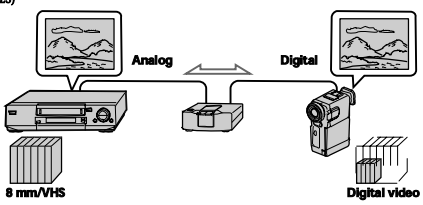
The DVMC-DA2 is a media converter unit which converts analog video signals to digital video signals and vice versa.

Converting pictures and sound from 8 mm/VHS format to DV format and vice versa (pages 8 - 10)
You can convert analog video on Hi8, 8 mm, or VHS format cassettes to digital video (DV) by connecting both analog and digital video units via the media converter. Component video and MPEG data are not compatible.

Since pictures and sound are recorded on the DV unit in digital format, little or no picture and sound quality are lost.

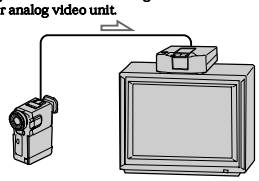
You can also convert digital video to analog video.

Note
You cannot record video which includes copyright protection signals. (pages 22-23)



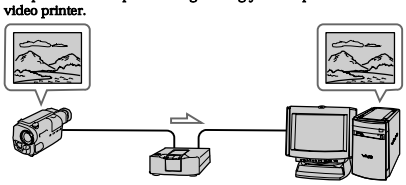
Viewing pictures from the DV unit (page 11 - 12)
You can enjoy high quality digital video when you connect a DV unit to a TV via the media converter using the DV connecting cable.

In this case, you do not have to change the connection between your TV and the other analog video unit.



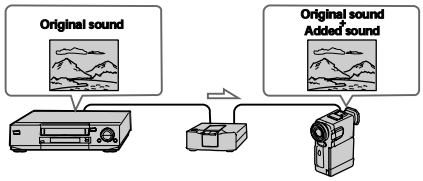
Capturing images from an analog video unit using a PC (page 13-15)
You can capture images from an analog video unit connected to your PC via the media converter using the DV (i.LINK) connector.
You can operate the analog video unit from the PC by connecting to the LANC (Local Application Control Bus System) connectors of the media converter and the analog video unit. (Compatible software is required for respective operations in the PC.)

In this case, you can edit a movie or add titles using your PC. You can also print out the captured images using your PC printer instead of a video printer.



Selecting the audio mode when recording to the DV unit (page 9)
You can add messages or background music after recording.

When you record to the DV unit from an analog video unit, you can select 16-bit audio mode for higher quality, or 12-bit audio mode for adding messages or background music (post sound recording).



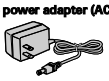
Listening to the audio with the desired mixing rate (page 12)
When playing back video recorded in 12-bit audio mode on a DV unit via the media converter, you can listen to: the recorded message and/or background music only (post sound recording), the original audio, or the combined audio of both tracks with the desired mixing rate (5 steps).

Checking the supplied parts and accessories

Check to make sure you have received the following items in the carton.

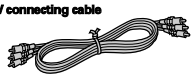
If something is missing, contact your Sony dealer or service facility.

AC power adapter (AC-MZ60A)

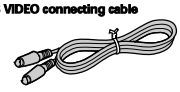


DV connecting cable

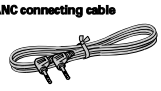
AV connecting cable



S VIDEO connecting cable



LANC connecting cable



Operating instructions

Warranty card

Important safeguard

Before using the media converter

Notes on the connections

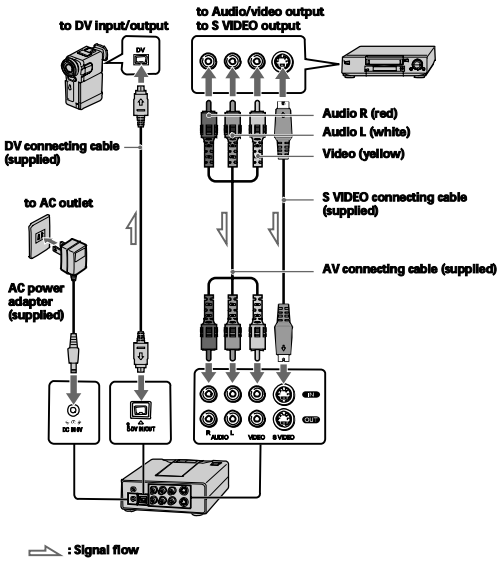
- Connect the AC power adapter (supplied) to the DC IN 6V connector on the unit. Do not connect the power source until all other connections are complete.
- If you connect your TV to a VCR via the media converter, you can watch VCR pictures whenever the media converter is not turned on (with the AC power adapter connected).
- Be sure to insert the connecting cable squarely into the connector/jack to avoid malfunctions.
- Keep metal objects away from the connector pins to avoid short circuits.
- If your PC has a 6-pin i.LINK (DV) connector, the converting cable (4-pin↔6-pin) VMC-IL4615, IL4635 (not supplied) is required.

If your analog video unit or TV has an S VIDEO input/output connector
For higher picture quality, use the supplied S VIDEO connecting cable to connect to the S VIDEO IN/OUT connector of the media converter rather than the VIDEO IN/OUT connector.

Using with an analog video unit and a digital video unit

Connecting an analog video unit and a DV unit via the media converter

Example: Converting analog video to digital video



Note

Depending on the condition of the analog video signal input to the media converter, some DV units may not output the analog video signal correctly when the digital video signal is output from the media converter. The video recorded on the DV unit is not affected. When previewing a recorded VIDEO ,we recommend connecting the input connector of the TV to the VIDEO OUT or S VIDEO OUT of the media converter.

If you want to convert digital video to analog video

Make the connection as follows:

- Connect the DV output connector of the DV unit to the i DV IN/OUT connector of the media converter using the supplied DV connecting cable.
- Connect the input connectors of the analog video unit to the AUDIO/VIDEO OUT connectors of the media converter using the supplied a AV connecting cable.

Converting analog video to digital video

You can convert and record pictures and sound from an analog video unit to a DV unit by connecting both units via the media converter.

1 Press POWER to turn on the media converter.

2 Press ANALOG IN.
The key indicator lights up.

3 Select the audio mode.
Each time you press and hold ANALOG IN for a few seconds, the audio mode changes as follows.
16-bit mode (high quality sound): The key indicator lights up in red.
12-bit mode (post sound recording): The key indicator lights up in green.

4 Pause playback on the analog video unit slightly ahead of the point from which you want to start recording.

5 Pause recording on the DV unit at the point from which you want to start recording.
For details on how to record, refer to the instruction manual of your DV unit.
(If you use the SONY DCR-PC1/PC7/PC10, the remote controller is necessary for recording operations.)

6 Start playback on the analog video unit, then start recording on the DV unit.
The picture and sound played back on the analog video unit are recorded on the DV unit.

continued

Converting digital video to analog video

You can convert and record pictures and sound from a DV unit to an analog video unit by connecting both units via the media converter.

For the connection, refer to "If you want to convert digital video to analog video" on page 9.

1 Press POWER to turn on the media converter.

2 Press DV IN.
The key indicator lights up.

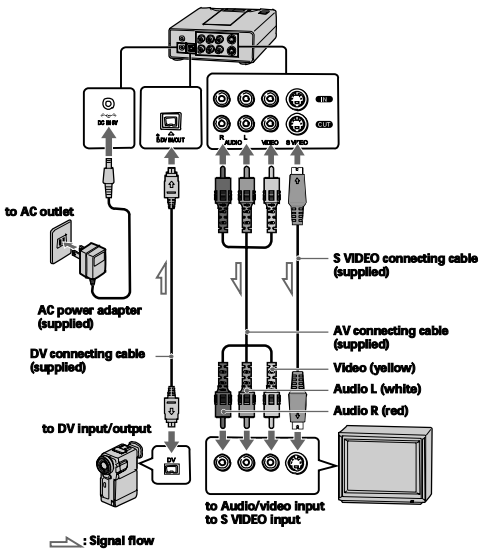
3 Pause playback on the DV unit slightly ahead of the point from which you want to start recording.

4 Pause recording on the analog video unit at the point from which you want to start recording.

5 Start playback on the DV unit, then start recording on the analog video unit.
The picture and sound played back on the DV unit are recorded on the analog video unit.

Viewing digital video on your TV

Connecting a DV unit and a TV via the media converter



continued

Viewing digital video on your TV

You can enjoy high quality digital video when you connect the DV unit to the TV via the media converter.

1 Press POWER to turn on the media converter.

2 Press DV IN.

The key indicator lights up.

3 Start playback on the DV unit.

Pictures played back on the DV unit appear on the TV screen.

Tip

TVs which conform to the ID-1 system automatically switch to wide mode when the appropriate signal is received.

Playing back the audio while changing the mixing rate

When playing back video recorded in 12-bit audio mode on a DV unit via the media converter, you can listen to: the recorded message and/or background music only (post sound recording), the original audio, or the combined audio of both tracks with the desired mixing rate (5 steps).

Press and while holding DV IN, press ANALOG IN.

Each time you press ANALOG IN, the mixing rate changes as follows:

Original audio	Added audio
100%	0%
75%	25%
50%	50%
25%	75%
0%	100%

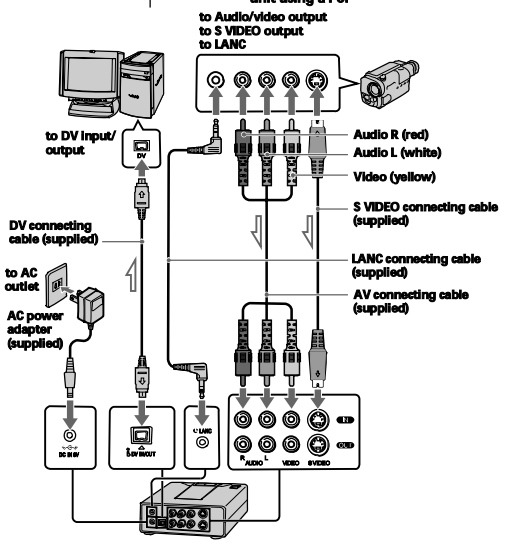
Note

When the power on the media converter is turned off, the mixing rate is reset to the default setting (original audio: 100%, added audio: 0%).

Using with an analog video unit and a PC

Connecting a PC and an analog video unit via the media converter

Example: Capturing images from an analog video unit using a PC.



Note

On using the media converter and a PC for analog video image editing, the PC must have DV image processing software which is capable of video image capturing and re-recording with the analog video equipment through the media converter.

continued

Tip

The DV still image capture card kit DVBK-CW200 for PC/AT compatible or DV still image capture board kit DVBK-2000 (not supplied) can be used. For details, refer to the operating instructions of DV still image capture card kit or DV still image capture board kit.

*1 For VAIO, DVgate Motion Version 1.2 or later

However, because the LANC connection cannot transfer the track number data (tape position of the DV unit) to the PC, image capturing by setting IN/OUT of the DVgate Motion is impossible. For manual control, select "Settings"–"Select Device Controller"–"Do not control DV device with DVgate Motion".

*2 For VAIO, DVgate Motion Version 1.4.2 or later

Select "Help"–"About DVgate Motion..." of DVgate Motion for checking the software version.

Tip

- For further information of LANC, see page 24.
- DVgate Motion is the software for the DV video and audio import/export bundled with VAIO.

If you want to convert captured images from your PC to analog video

Make the connection as follows:

- Connect the DV output connector of the PC to the i.DV IN/OUT connector of the media converter using the supplied DV connecting cable.
- Connect the input connectors of the analog video unit to the AUDIO/VIDEO OUT connectors of the media converter using the supplied AV connecting cable.

Capturing images from an analog video unit using a PC

You can capture the images from an analog video unit using a PC which is connected via the media converter.(*1)

Also, you can operate the analog video unit from the PC by the LANC connection.(*2)

Compatible software is required for respective operations in the PC.

1 Press POWER to turn on the media converter.

2 Press ANALOG IN.

The key indicator lights up.

3 Start playback on the analog video unit slightly ahead of the point from which you want to start capturing images.

You can operate the analog video unit from the PC by the LANC connection. But some functions, depending on the analog video unit, may not work.

4 Start capturing procedures on your PC.

The operation procedures depend on your PC and the software which you use.

For details on how to capture images and how to operate the analog video unit from the PC, refer to the instruction manual of your PC and software, or ask your PC and software makers.

Note

You cannot operate the media converter from a LANC compatible unit, for example a remote commander or remote tripod.

Recording images from a PC to analog video

1 Press POWER to turn on the media converter.

2 Press DV IN.

The key indicator lights up.

3 Start recording on the analog video unit.

You can operate the analog video unit from the PC by the LANC connection. But some functions, depending on the analog video unit, may not work.

4 Start outputting procedures on your PC.

The operation procedures depend on your PC and the software which you use.

For details on how to capture images and how to operate the analog video unit from the PC, refer to the instruction manual of your PC and software, or ask your PC and software makers.

MC-Service

Precautions

Use

- Operate the product only with the supplied AC power adapter. If you use a different AC power adapter, it may cause a malfunction.

Unified polarity plug

- Should any liquid or solid object fall into the cabinet, unplug the product and have it checked by qualified personnel before operating it further.
- Always turn the product off when not in use.
  Unplug the product from the wall outlet if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Do not overload wall outlets, extension cords, or convenience receptacles beyond their capacity, since this can result in fire or electric shock.
- Do not use attachments not recommended by the manufacturer, as they may cause hazards.
- Do not touch the AC power adapter with wet hands. If you fail to observe this, it may cause electric shock.
- Do not drop or give a mechanical shock to the product.

Installation

- To prevent internal heat build-up, do not block the ventilation openings.
- Avoid operating the product at temperatures below 5°C (41°F).
- Do not subject the product to high temperature or direct sunlight. If you do not observe the above instructions, the product may become deformed.
- Do not place the product in locations where it is wet, humid, dusty, smoky, or steamy. Do not use this product near or around water. It may cause fire or electric shock. Especially, do not use the product in the bathroom.
- If the product is transported directly from a cold to a warm location, or if the room temperature has changed suddenly, moisture may condense in the unit. If this happens, let the moisture evaporate before using the product.
- Do not place the product on an unstable cart, stand, table, or shelf. The product may fall, causing serious injury to a child or an adult, and serious damage to the product.
- Do not allow anything to rest on or roll over the power cord, and do not place the product where the power cord is subject to wear or abuse.

Others

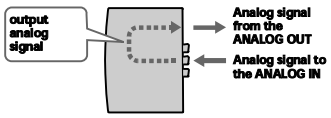
- Unplug the product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - When the power cord or plug is damaged or frayed.
  - If liquid has been spilled into the product.
  - If the product has been exposed to rain or water.
  - If the product has been subject to excessive shock by being dropped, or the cabinet has been damaged.
  - If the product does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - When the product exhibits a distinct change in performance — this indicates a need for service.
- Do not disassemble or modify the product. It may cause fire or electric shock. Have the product checked and repaired at your Sony dealer or local authorized Sony service facility.
- Do not attempt to service the product yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.
  Unauthorized substitutions may result in fire, electric shock, or other hazards.
- Upon completion of any service or repairs to the product, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the product is in safe operating condition, and to so certify.
- Unplug the product from the wall outlet before cleaning. Clean the product with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine.

Technical information

Signal flows

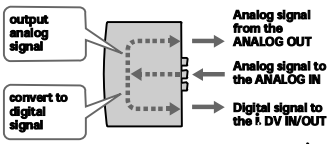
The signal flow of the media converter and the connected unit is illustrated below:

When the media converter is turned off (with the AC power adapter connected)



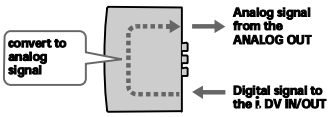
When you connect your TV to a VCR via the media converter, you can watch VCR pictures whenever the media converter is not turned on.

When the media converter is turned on (When inputting analog signals)


output analog signal
convert to digital signal
Analog signal from the ANALOG OUT
Analog signal to the ANALOG IN
Digital signal to the i. DV IN/OUT

The signals are output from both the i. DV IN/OUT and ANALOG OUT connectors.

When the media converter is turned on (When inputting digital signal)



continued

Output/input of analog video signals

Depending on which connection is used, VIDEO IN or S VIDEO IN, the output signal changes as follows.

The input signal is coming from only the VIDEO IN connector
→ The signal is output from the VIDEO OUT connector, but not from the S VIDEO OUT connector.

The input signal is coming from only the S VIDEO IN connector
→ The signal is output both from the VIDEO OUT and S VIDEO OUT connectors.

The input signal is coming from both the VIDEO IN and S VIDEO IN connectors
→ The signal is output both from the VIDEO OUT and S VIDEO OUT connectors.

Notes

- When connecting to only the VIDEO IN connector, the signal cannot be output to the S VIDEO OUT connector.
- When connecting both the S VIDEO IN and VIDEO IN connectors, the S VIDEO signal is automatically selected for converting the digital video signal regardless signal type.
- For higher quality pictures, we recommend connecting both the S VIDEO IN and S VIDEO OUT connectors.

Copyright precautions

On recording

When you play back video which includes copyright protection signals and the playback signals are input to the media converter, the PROTECT indicator on the media converter lights up. In this case, You cannot record or capture the video output from the media converter.

ID-2 system
This copyright protection system is used for the analog connection. The ID-2 system is added to the ID-1 system.

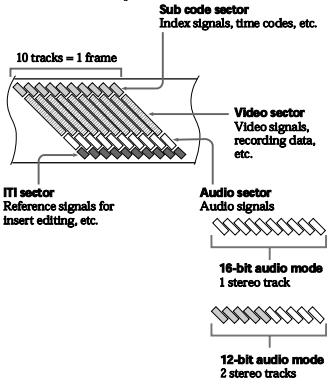
CGMS-D system
This copyright protection system is used for the digital connection.

Macrovision

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering from disassembly is prohibited.

DV recording format

The following figure shows how the signals are recorded on a DV tape.



continued

12-bit/16-bit audio output modes

16-bit mode

The 16-bit mode uses the whole audio area to output one stereo track. The original audio can be output with high quality in this mode. This mode uses 48 kHz sampling frequencies.

12-bit mode

The 12-bit mode consists of two separate stereo tracks – Stereo 1 and 2. This mode uses 32 kHz sampling frequencies. With the DV unit, you can add messages or background music independent from the recorded sound in this mode.

LANC connector

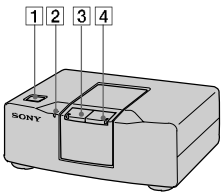
LANC (Local Application Control Bus System) is a system to control other equipment. The data is transported via the LANC connectors, and includes the operation command, such as play, stop, and pause as well as the status of the equipment.

is the label of the LANC.

- If your analog video unit has a LANC setting choice of "M" (control side) or "S" (passive side), be sure to select "S".
- To control a video camera recorder with the LANC connection, set the video camera recorder to "VTR" mode.
- When you control an analog video unit from the PC, some functions which the analog video does not have may not be available.

Locating the parts and controls

Front



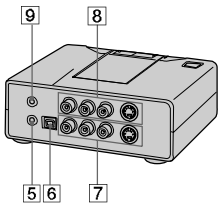
1 **POWER button**
Turns on/off the media converter.

2 **PROTECT indicator**
Lights when the input picture includes a copy protection signal.
You cannot record the signal when this indicator is lit.

3 **ANALOG IN key and indicator**
Select the signal input from the AUDIO/VIDEO/S VIDEO IN as the input signal to the media converter.

4 **DV IN key and indicator**
Select the signal input from the i DV IN/OUT as the input signal to the media converter.

Rear



5 **DC IN 6V connector**
Connect to the supplied AC power adapter.

6 **i DV IN/OUT connector**
Connect to the DV unit.

7 **AUDIO/VIDEO/S VIDEO OUT connectors**
Connect to the analog video unit or TV.

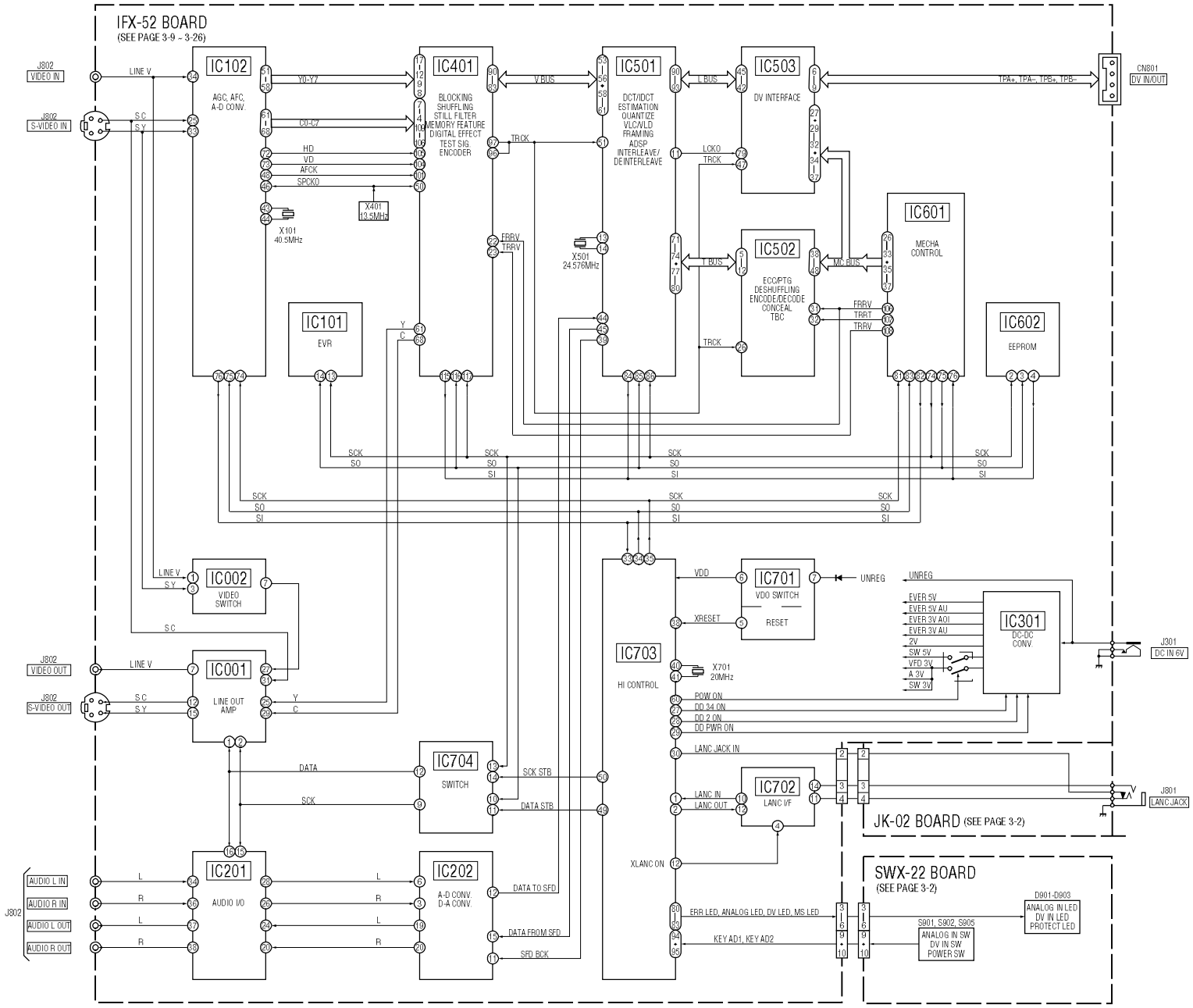
8 **AUDIO/VIDEO/S VIDEO IN connectors**
Connect to the analog video unit.
When you connect both the S VIDEO IN and VIDEO IN connectors, the S video signal is automatically selected.

When connecting to VIDEO IN connectors only, no signals are output from the S VIDEO OUT connector.

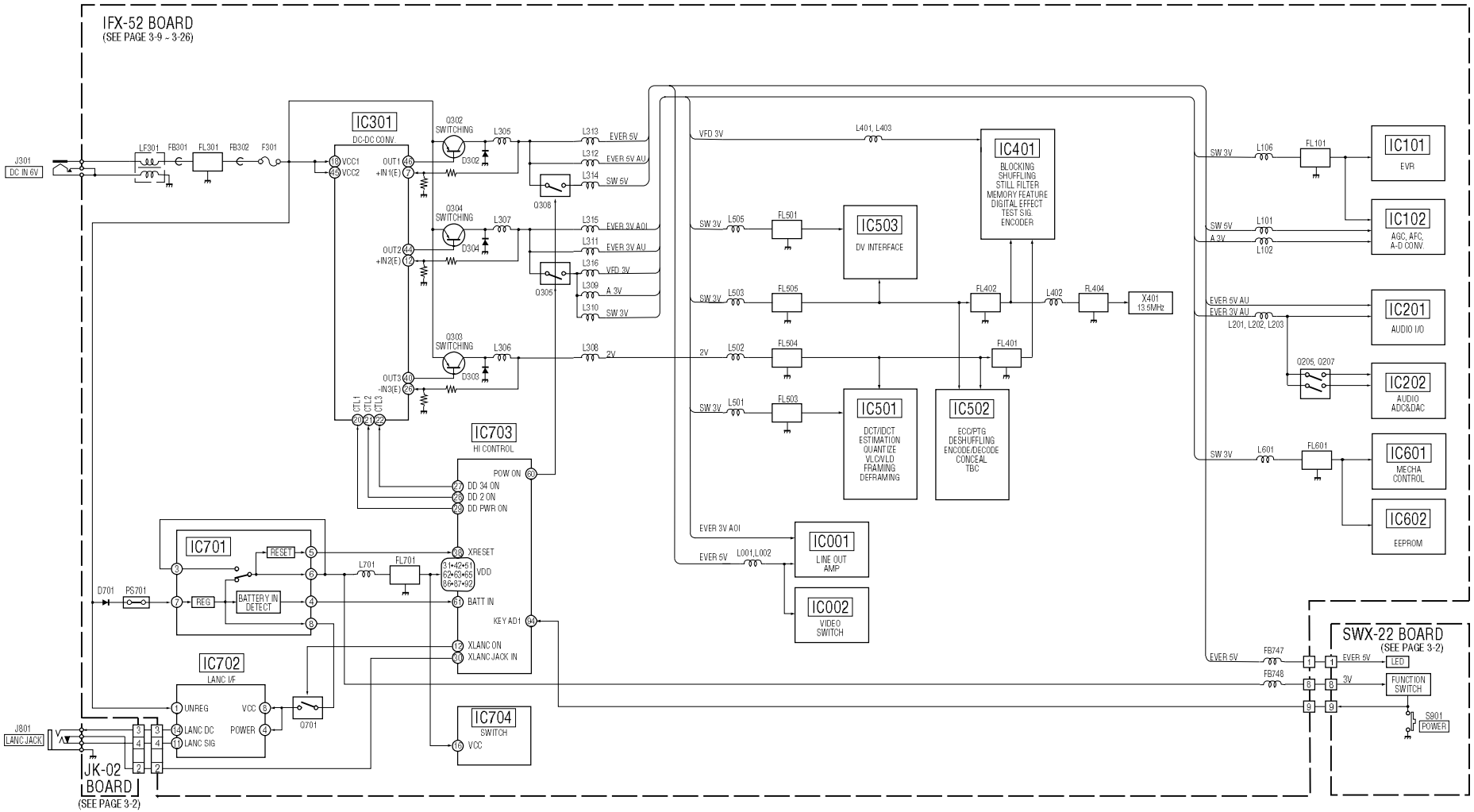
9 **LANC connector**
Connect to a video unit with a LANC connector.

SECTION 2
BLOCK DIAGRAMS

2-1. OVERALL BLOCK DIAGRAM



2-2. POWER BLOCK DIAGRAM

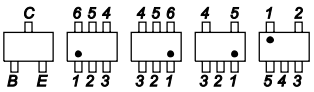


SECTION 3
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

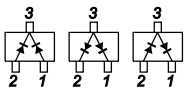
THIS NOTE IS COMMON FOR WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)
- ▒▒▒: Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.

Transistor



Diode



(For schematic diagrams)
- All capacitors are in μF unless otherwise noted. pF : μμF. 50V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10W unless otherwise noted. kΩ=1000Ω, MΩ=1000kΩ.
- Caution when replacing chip parts. New parts must be attached after removal of chip. Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.

Example	C541	L452
	22U	10UH
	TA CH	2520

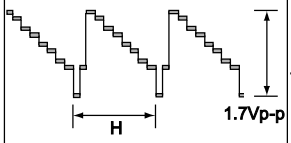
Kinds of capacitor
Temperature characteristics
External dimensions (mm)

- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used. In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination. Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- B + : B+ Line
- B − : B– Line
- : IN/OUT direction of (+,–) B LINE.
- : adjustment for repair.
- Circled numbers refer to waveforms.

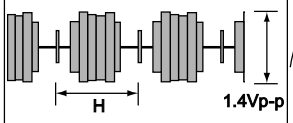
Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Waveform

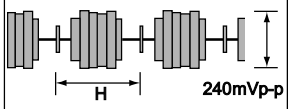
① IC001 ⑯ YOUT



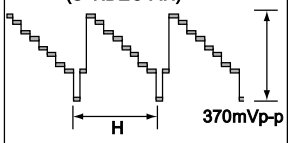
② IC001 ⑫ COUT



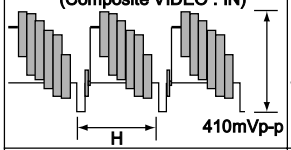
③ IC102 ㉕ AGCCIN
(S-VIDEO : IN)



④ IC102 ㉝ ANIN1
(S-VIDEO : IN)



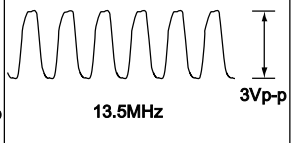
⑤ IC102 ㉞ ANIN2
(Composite VIDEO : IN)



⑥ IC102 ㊸ VCXD0

⑦ IC401 ㊶ VCXD0(CL401)
IC102 ㊽ CLKP(CL101)

⑧ IC401 ㊿ SPCK(CL403)

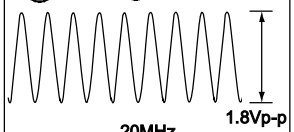


⑨ IC501 ⑭ XOO(R510)

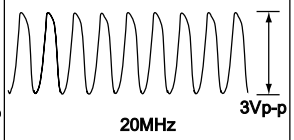
⑩ IC501 ㉚ POO
(L504 – C509)

⑪ IC501 ⑪ LCKO(CL505)
IC503 ⑲ X1(CL505)

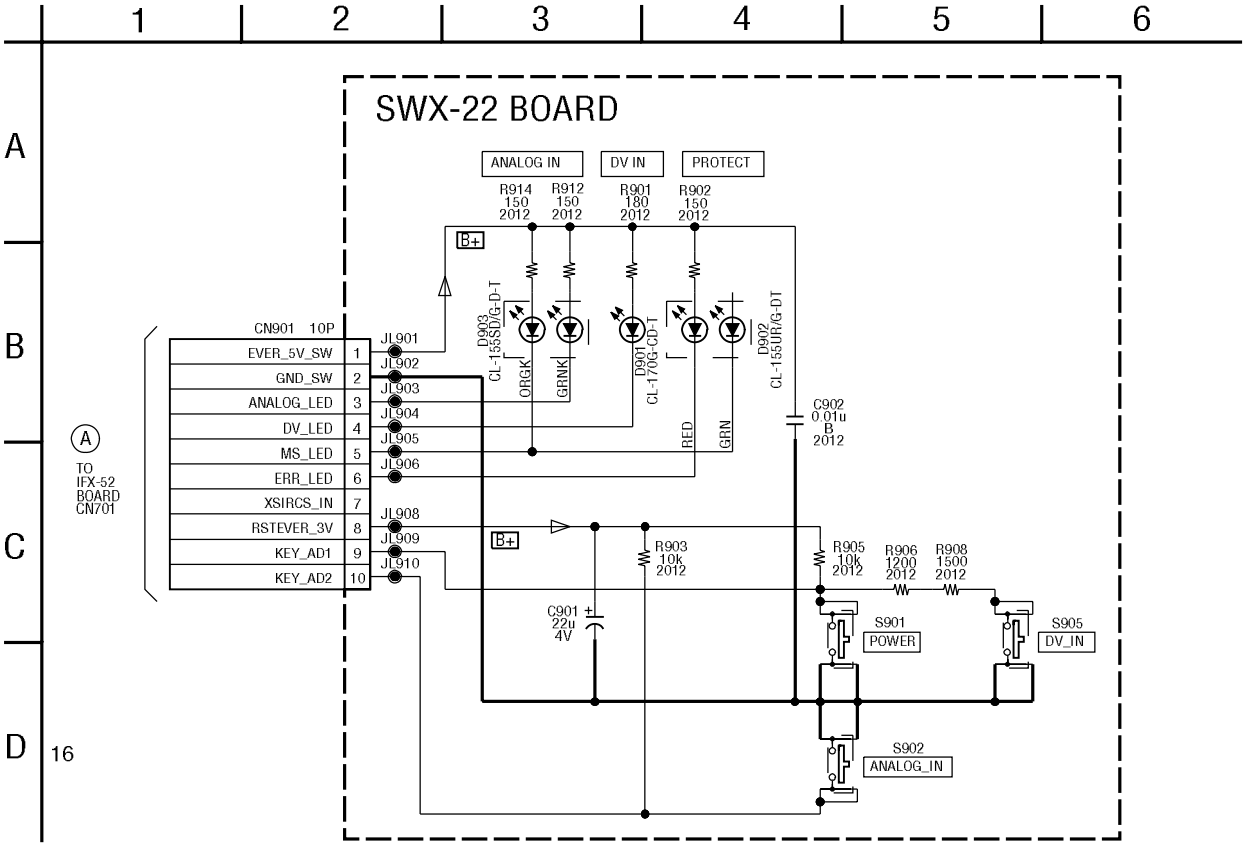
⑫ IC601 ① XO



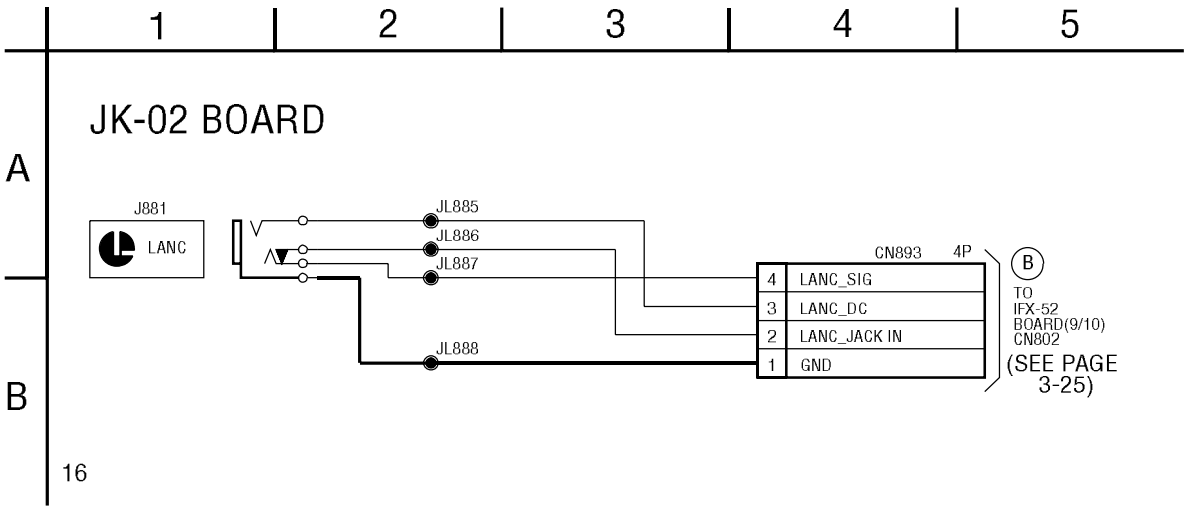
⑬ IC703 ㊵ 20MHz OUT



SWX-22 (SWITCH) SCHEMATIC DIAGRAM

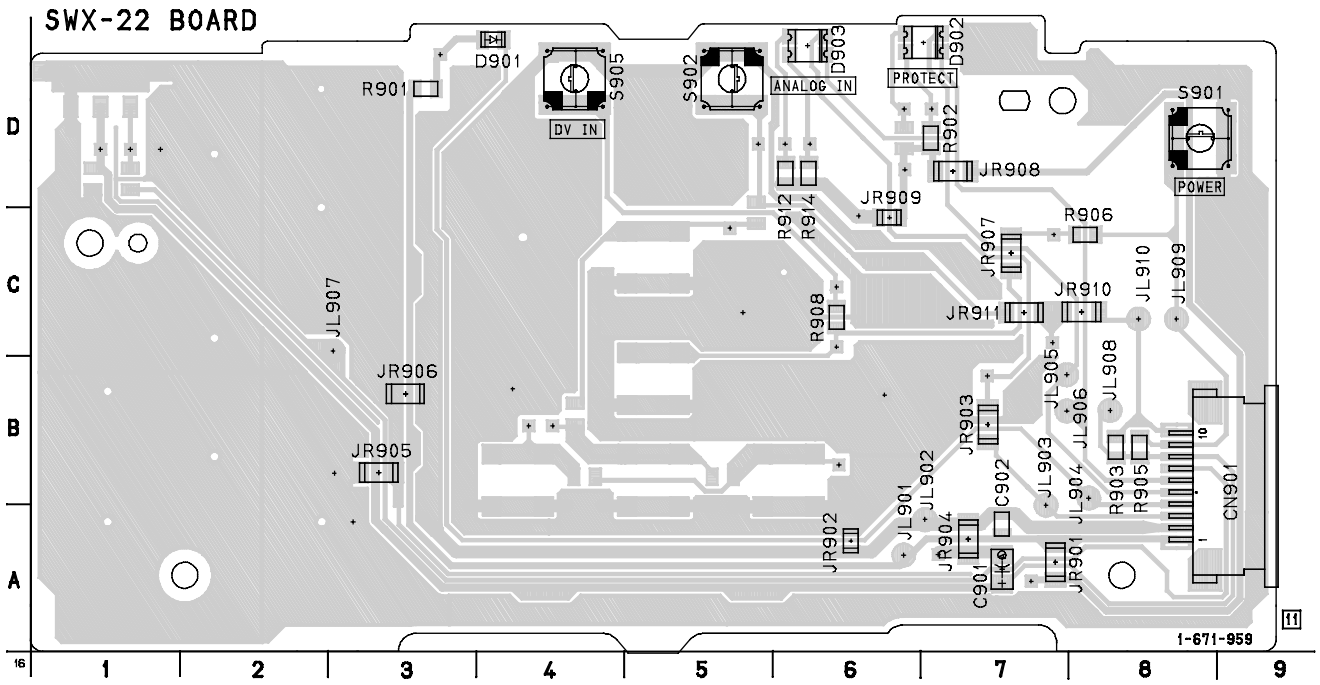


JK-02 (LANC JACK) SCHEMATIC DIAGRAM



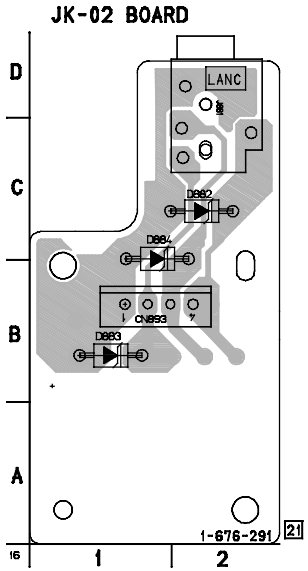
SWX-22 (SWITCH) PRINTED WIRING BOARD

There are few cases that the part printed on this diagram isn't mounted in this model.



JK-02 (LANC JACK) PRINTED WIRING BOARD

There are few cases that the part printed on this diagram isn't mounted in this model.



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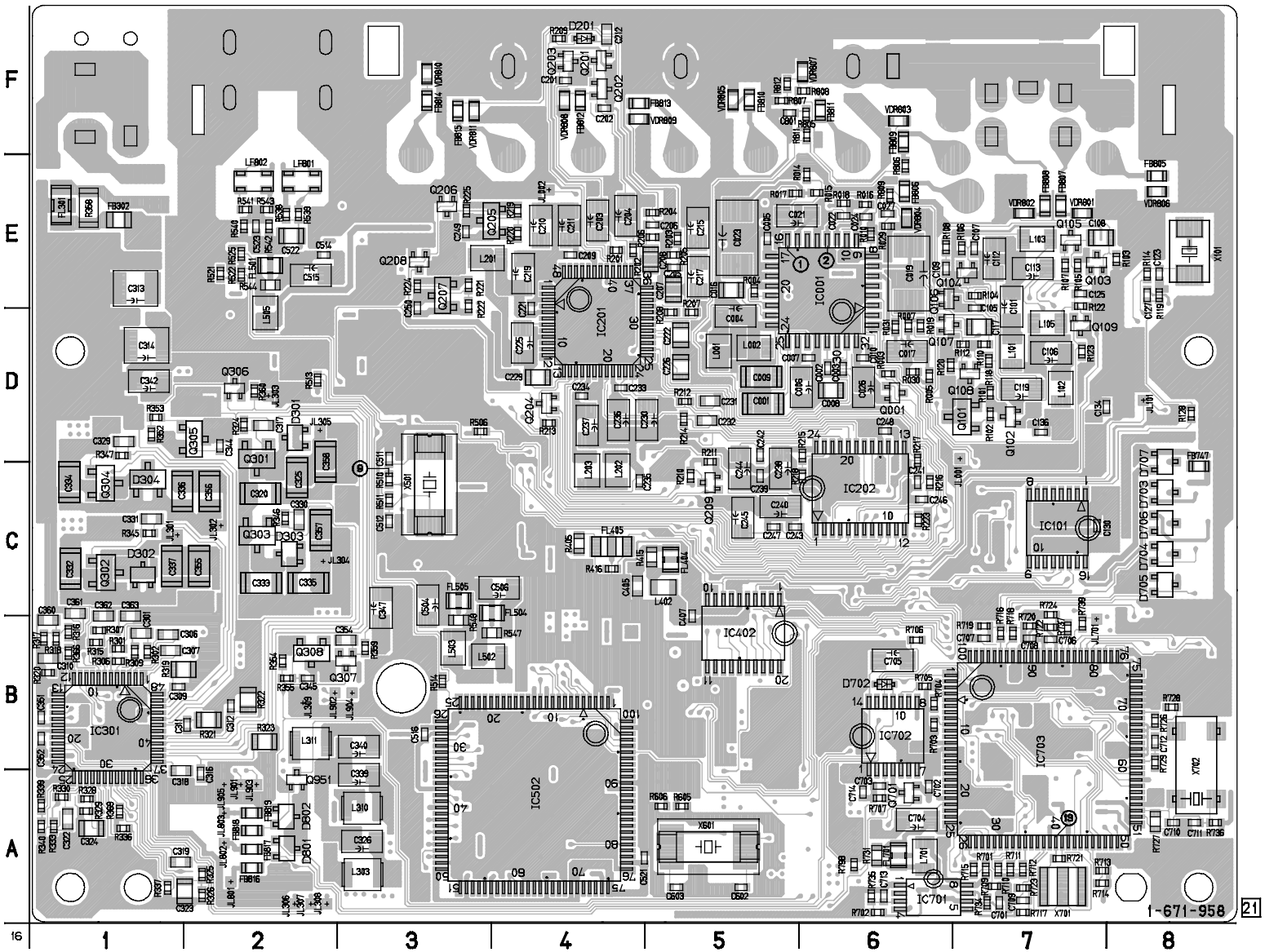
IFX-52 (MAIN : SIDE A) PRINTED WIRING BOARD

There are few cases that the part printed on this diagram isn't mounted in this model.

IFX-52 BOARD

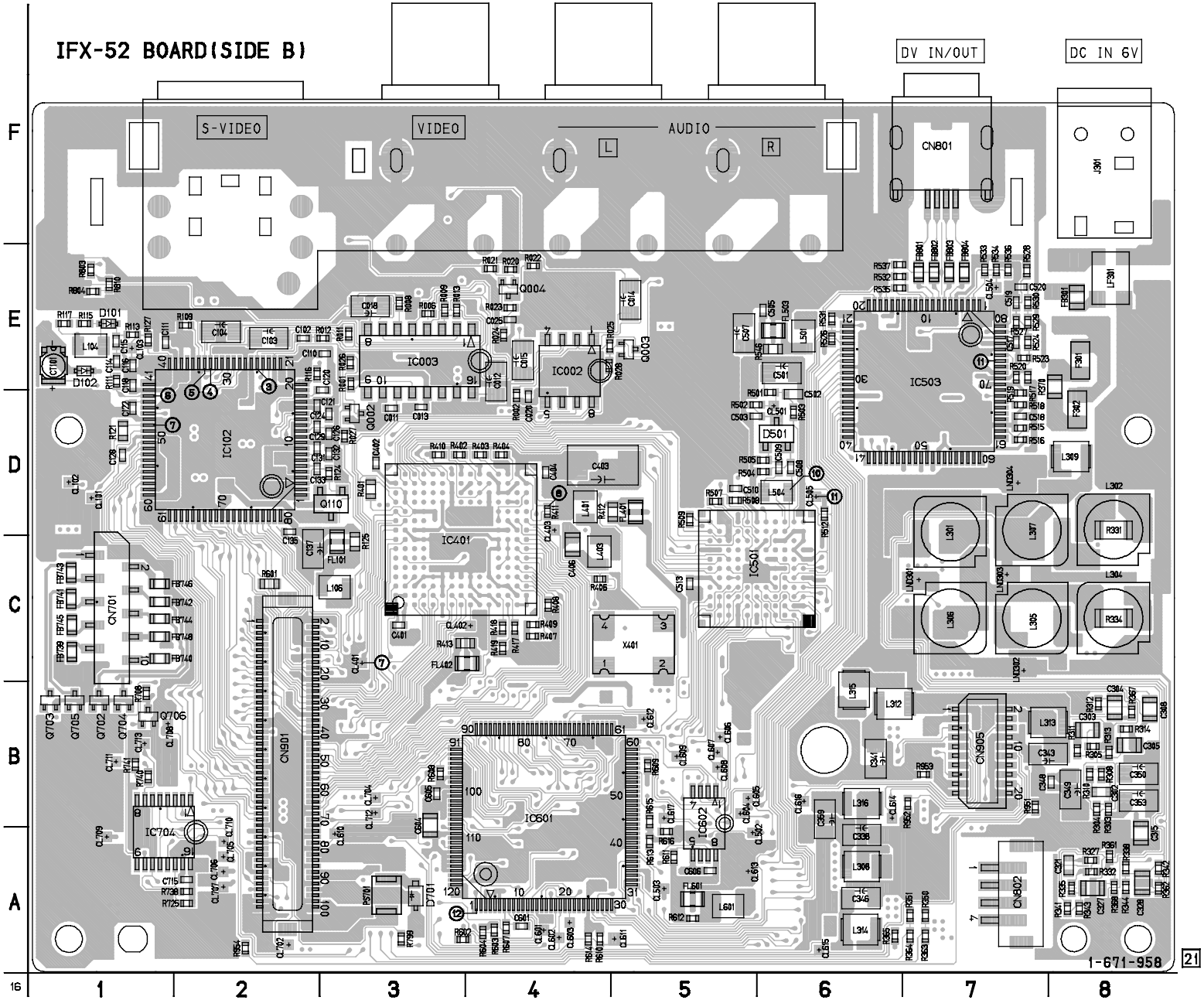
D302	C-1
D303	C-2
D304	C-1
D702	B-6
D703	C-8
D705	C-8
D706	C-9
D707	D-8
D801	A-2
D802	A-2
IC001	E-6
IC101	C-7
IC201	D-4
IC202	C-6
IC301	B-1
IC502	A-4
IC701	A-6
IC702	B-6
IC703	B-7
Q101	D-7
Q102	D-7
Q103	E-7
Q104	E-7
Q105	E-7
Q106	D-7
Q107	D-7
Q108	D-7
Q109	D-7
Q201	F-4
Q202	F-4
Q203	F-4
Q205	E-4
Q206	E-3
Q207	E-3
Q208	E-3
Q209	C-5
Q302	C-1
Q303	C-2
Q304	C-1
Q305	D-2
Q306	D-2
Q307	B-3
Q308	B-2
Q701	A-6
Q951	A-2

IFX-52 BOARD(SIDE A)



IFX-52 (MAIN : SIDE B) PRINTED WIRING BOARD

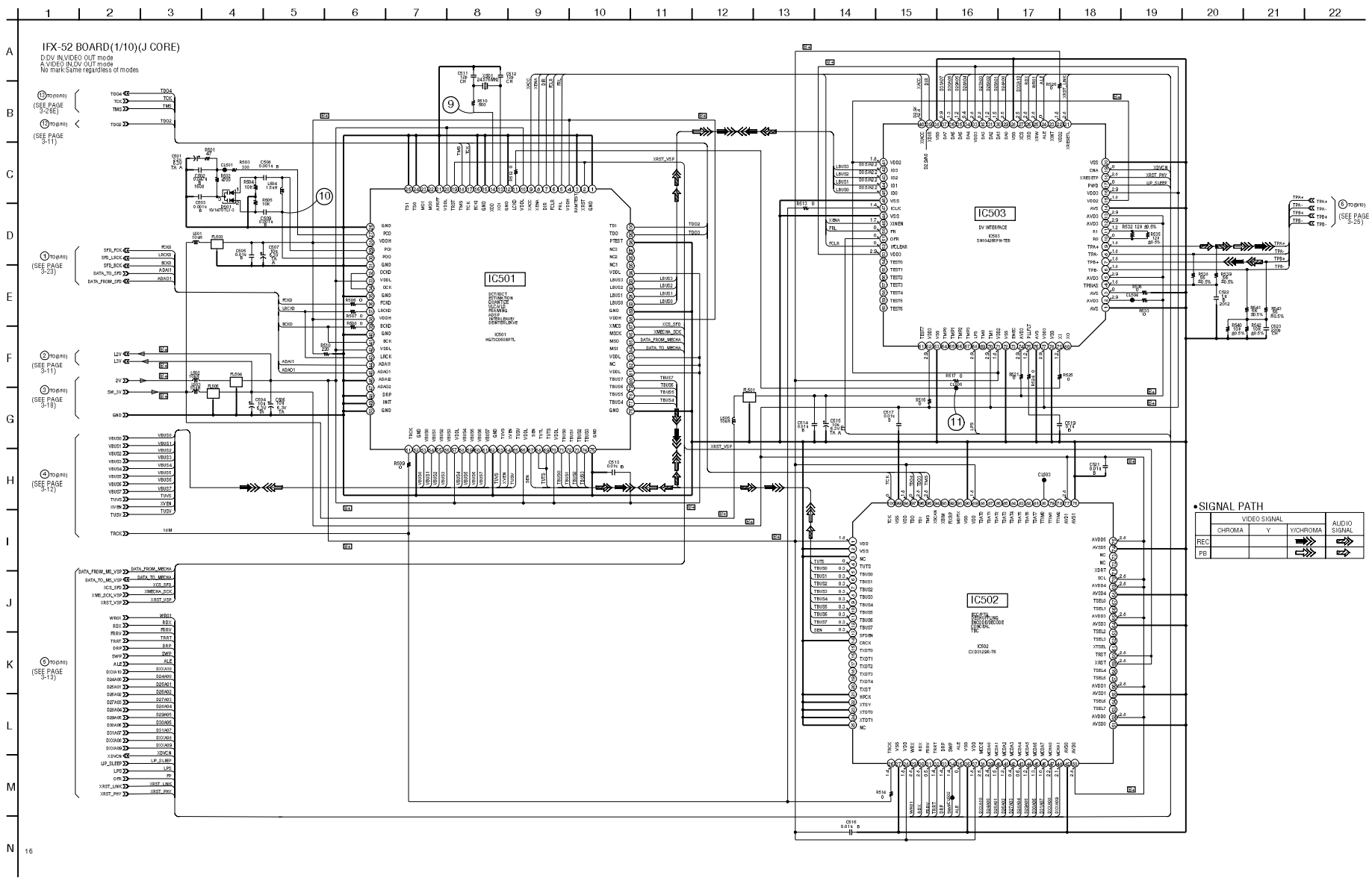
There are few cases that the part printed on this diagram isn't mounted in this model.



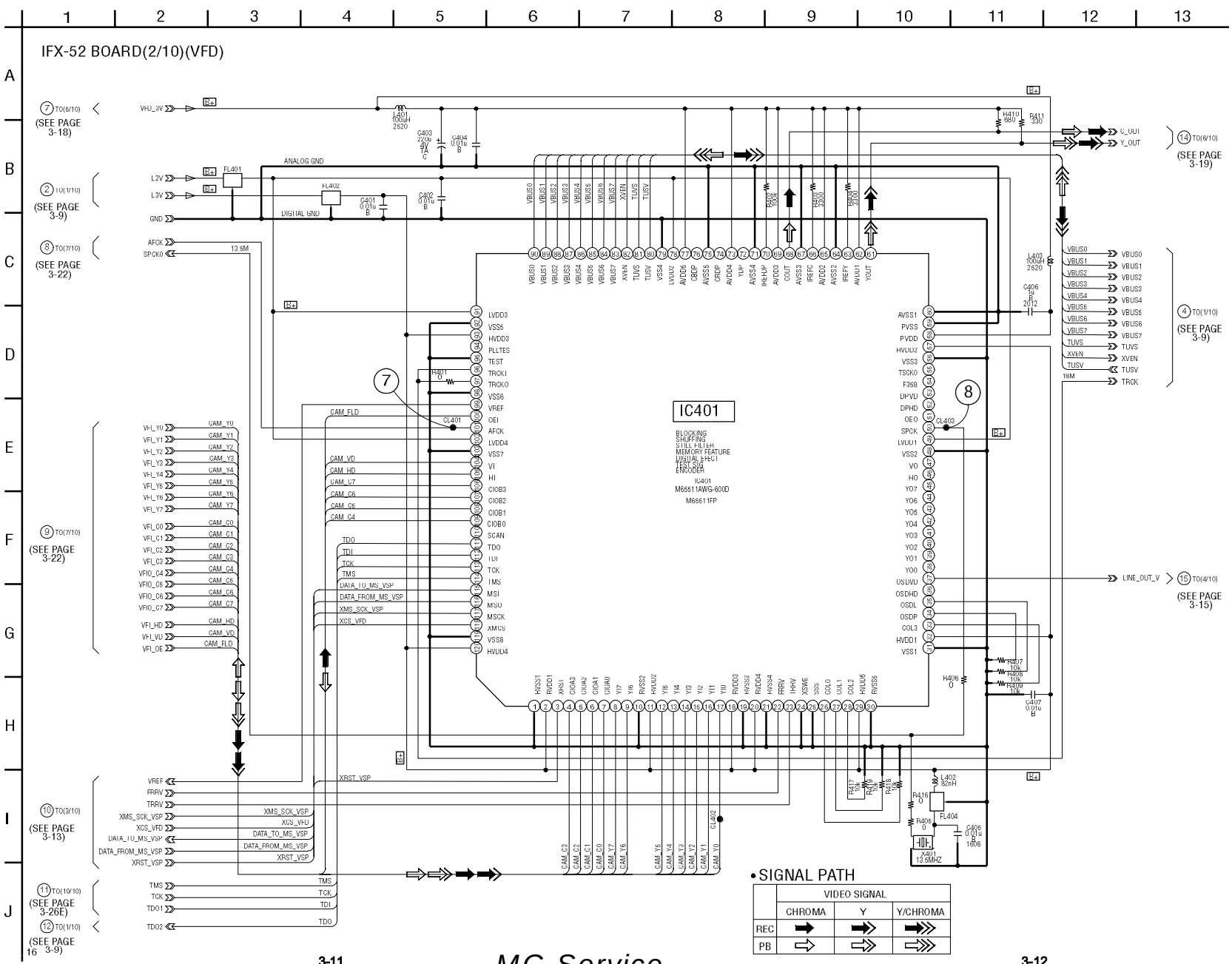
IFX-52 BOARD

D101	E-1
D102	E-1
D501	D-6
D701	A-3
IC002	E-4
IC102	D-2
IC401	C-3
IC501	C-5
IC503	E-7
IC601	B-4
IC602	B-5
IC704	A-1
Q003	E-5
Q004	E-4
Q110	D-3
Q702	B-1
Q703	B-1
Q704	B-1
Q705	B-1

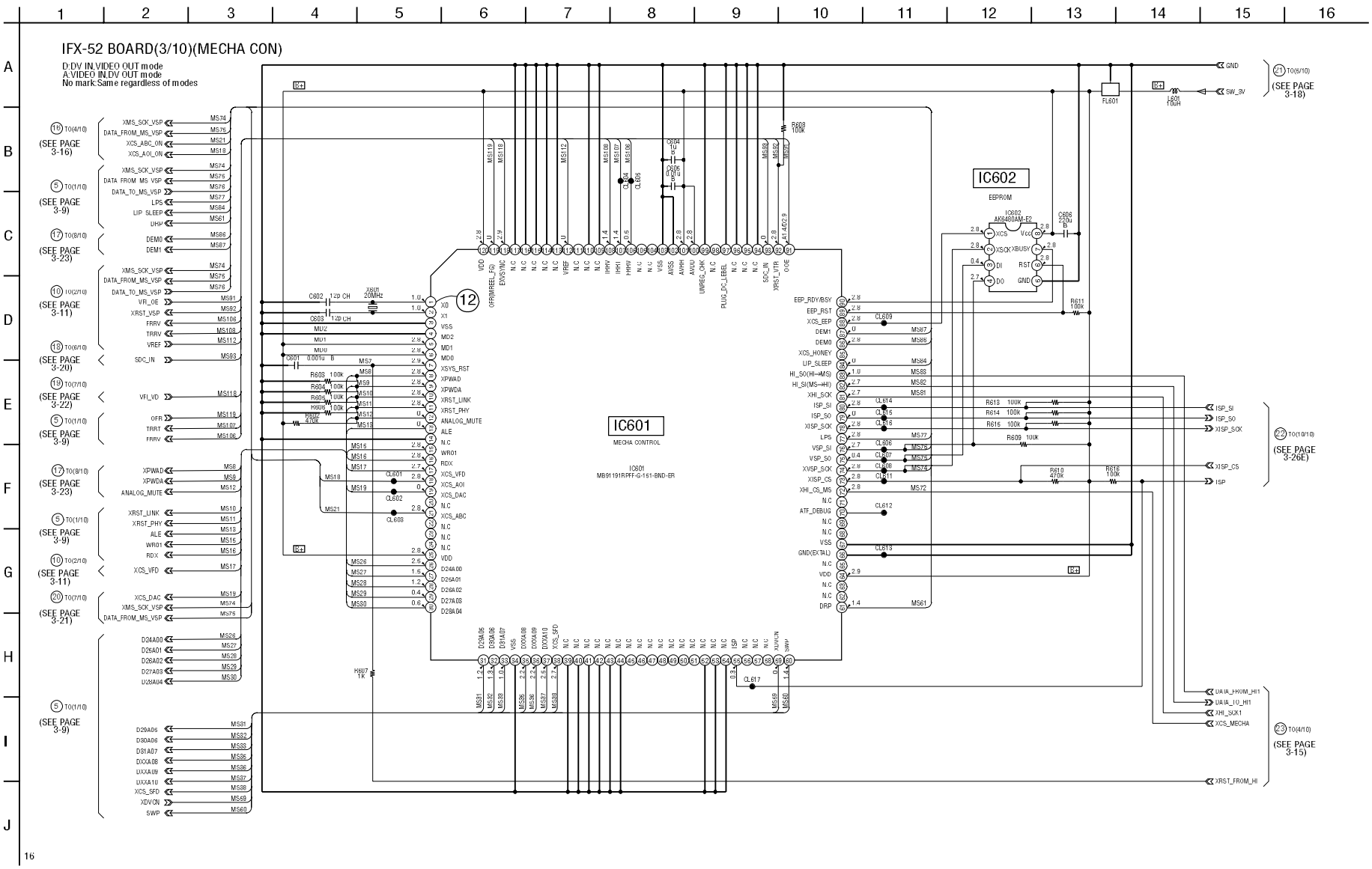
IFX-52 (J CORE) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board. • Refer to page 3-1 for waveforms.



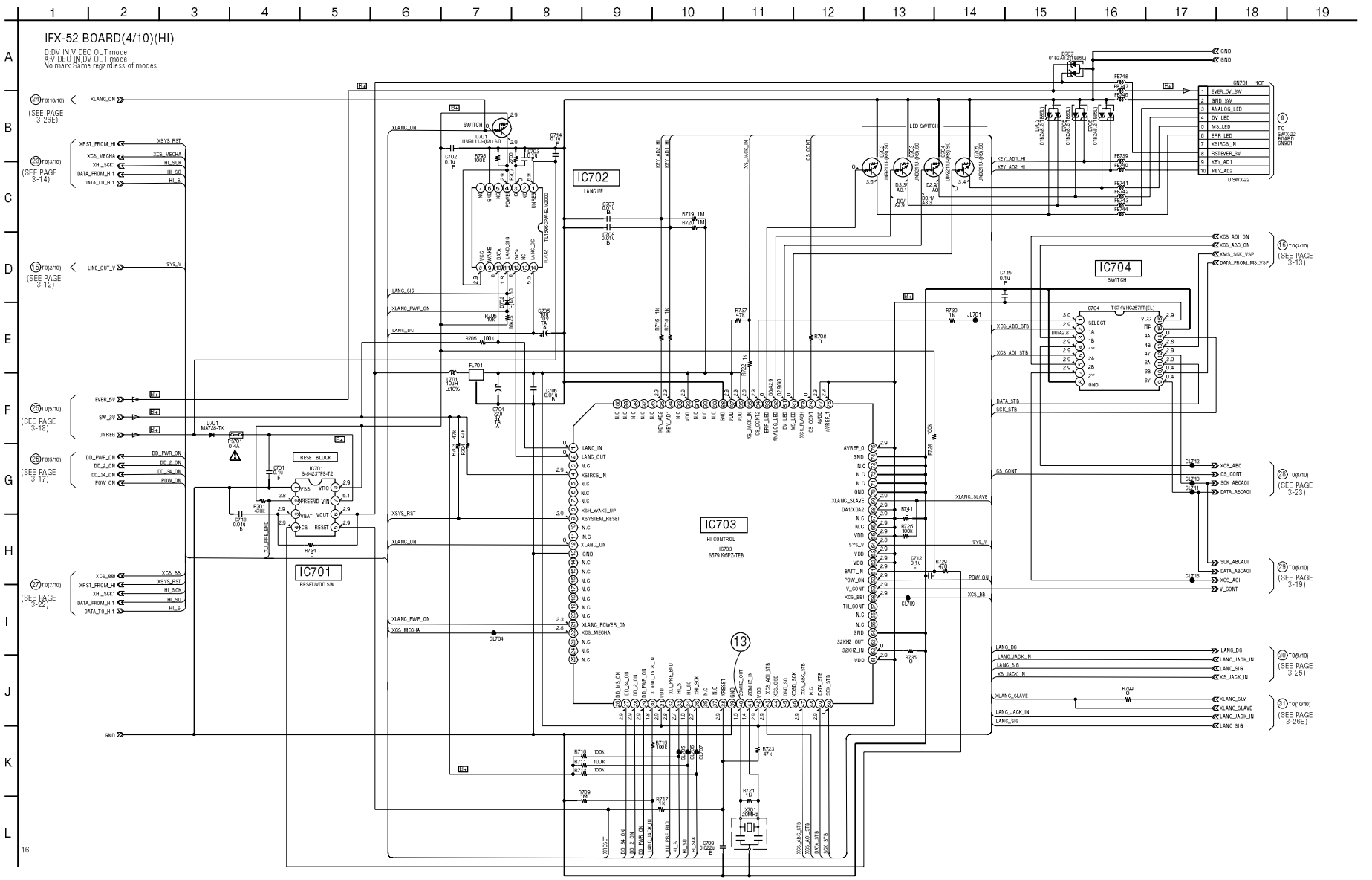
IFX-52 (VFD) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board. • Refer to page 3-1 for waveforms.



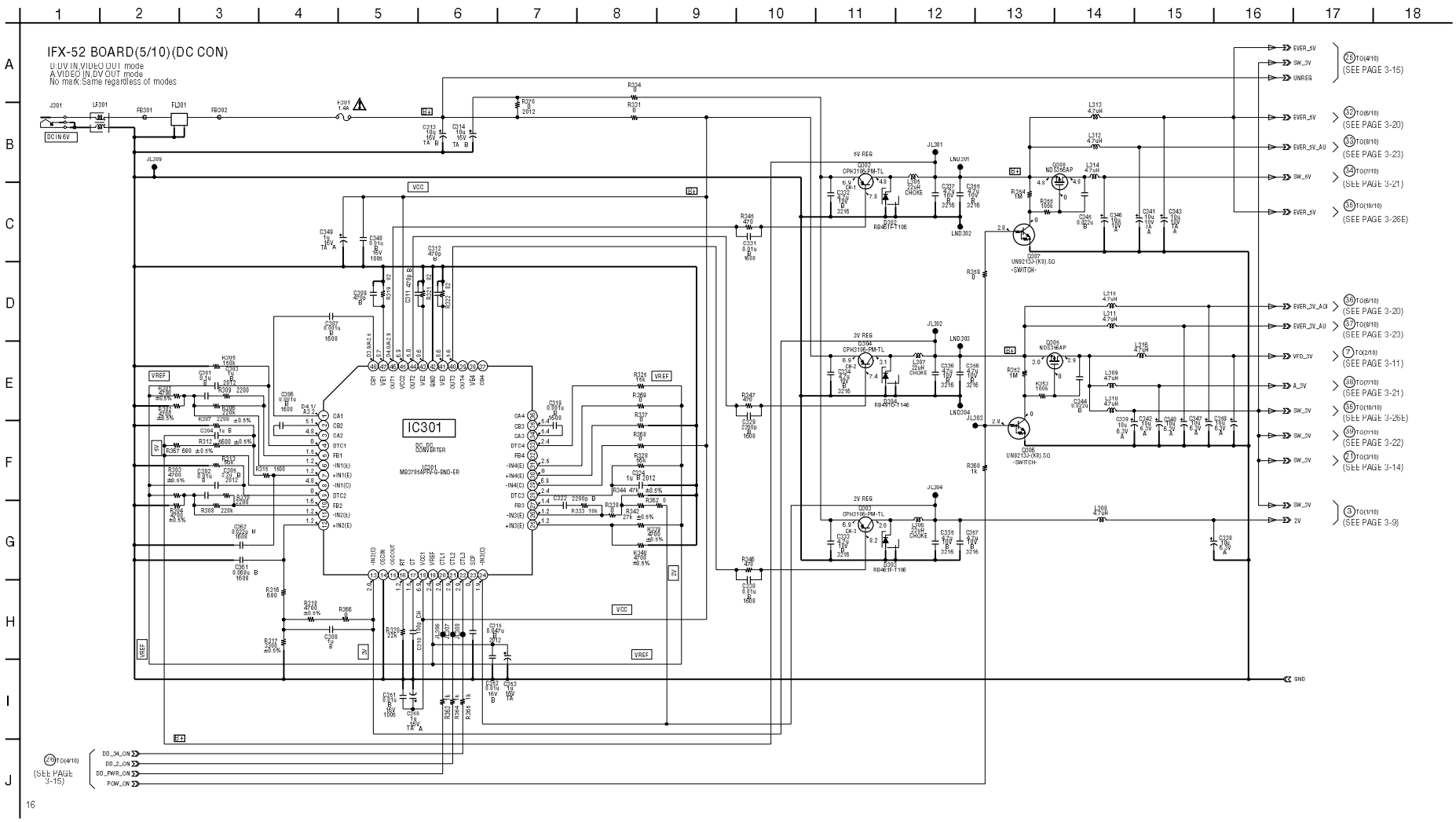
IFX-52 (MECHA CON) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board. • Refer to page 3-1 for waveforms.



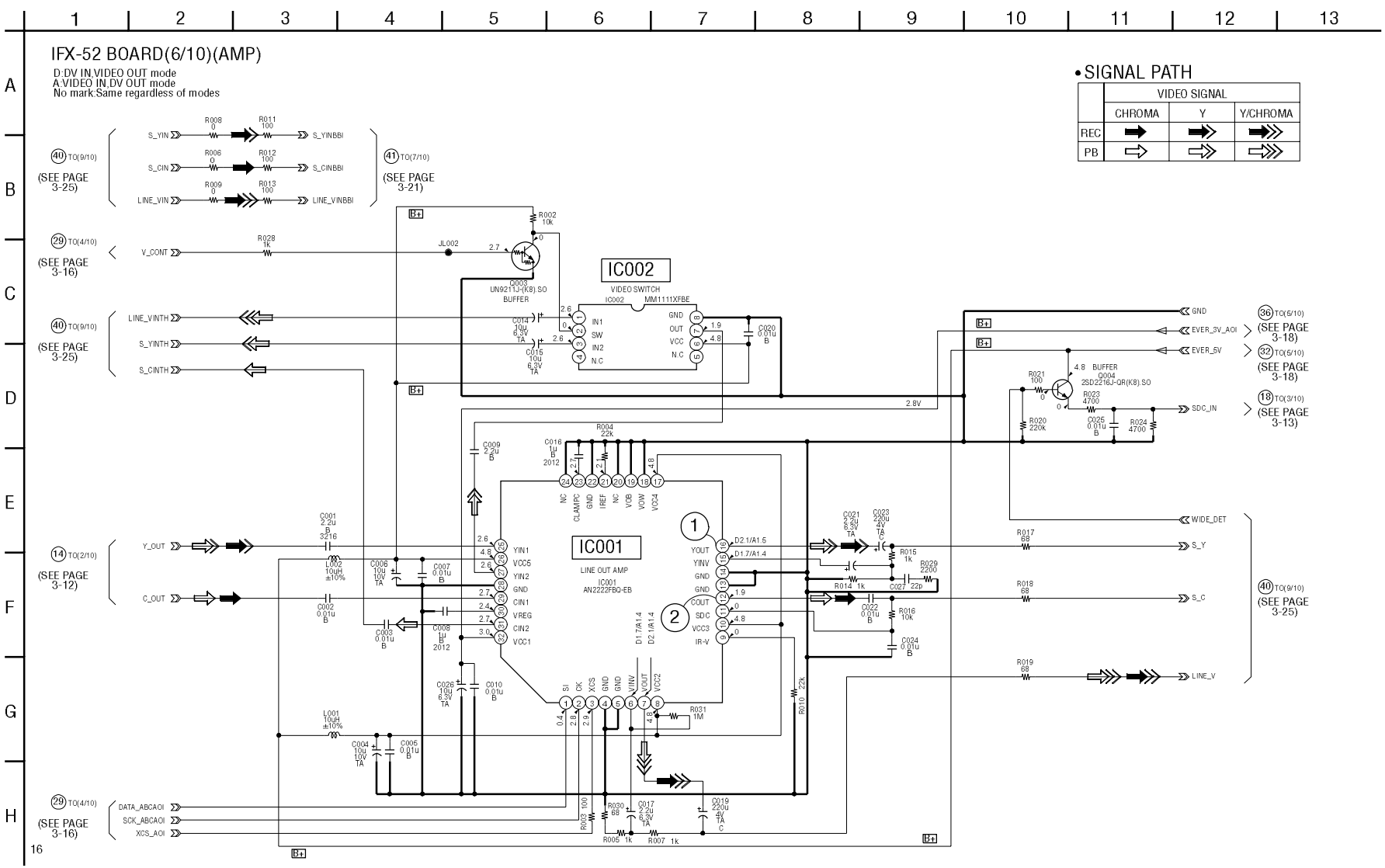
IFX-52 (HI) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board. • Refer to page 3-1 for waveforms.



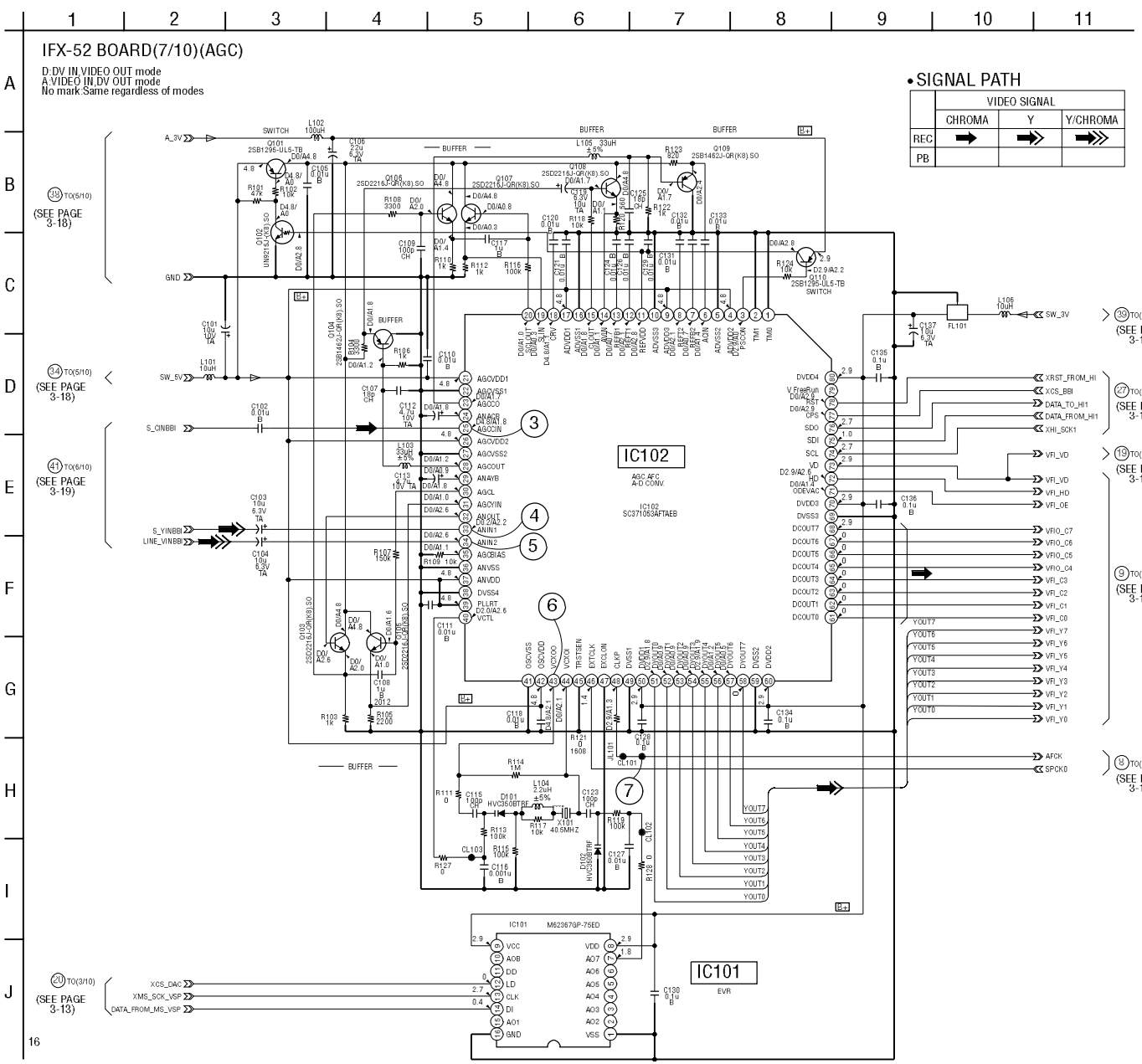
IFX-52 (DC CON) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board.



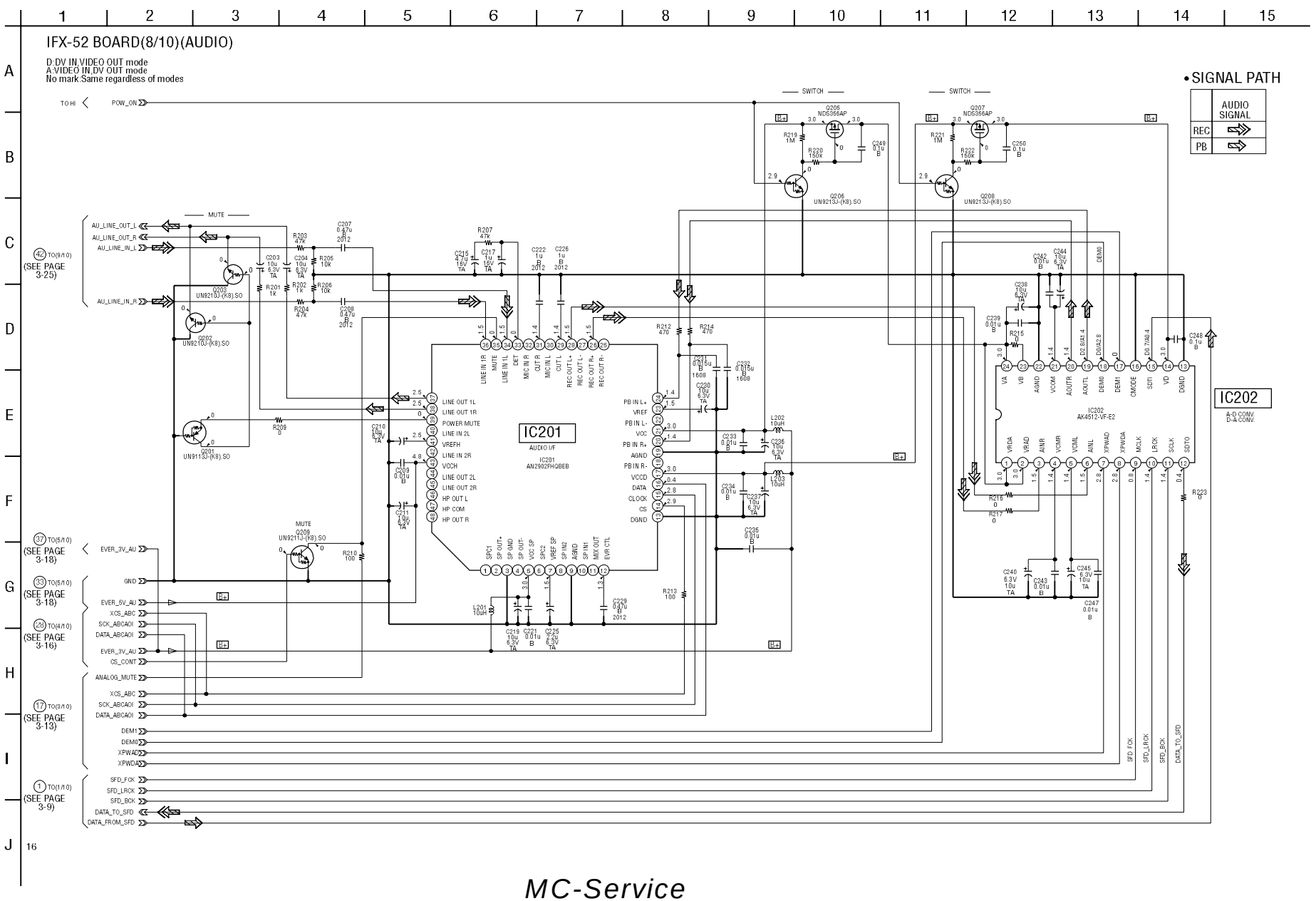
IFX-52 (AMP) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board. • Refer to page 3-1 for waveforms.



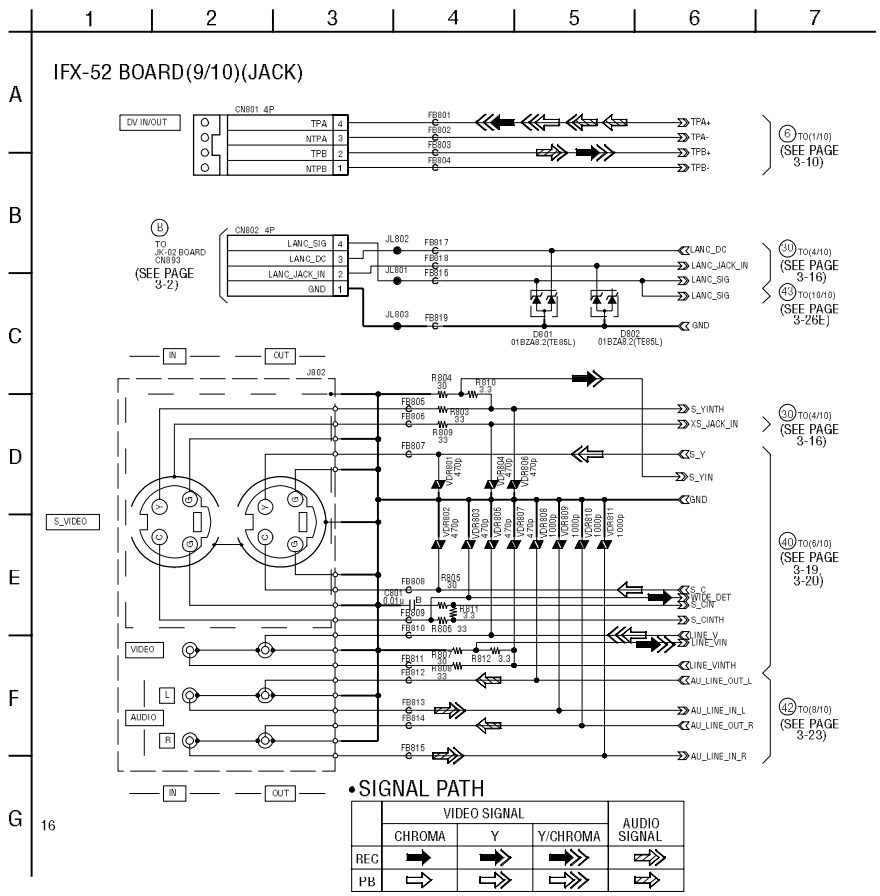
IFX-52 (AGC) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board. • Refer to page 3-1 for waveforms.



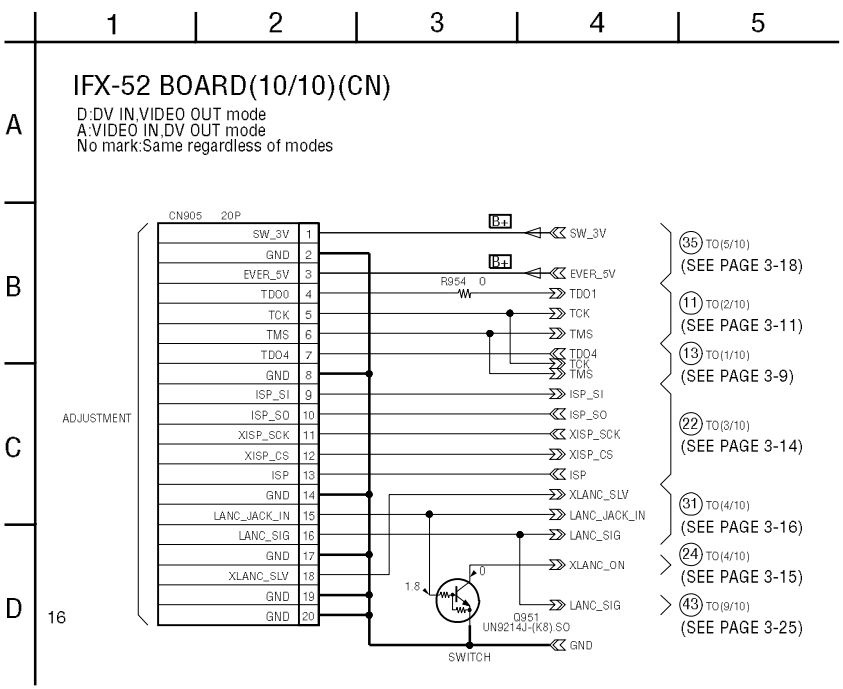
IFX-52 (AUDIO) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board.



IFX-52 (JACK) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board.



IFX-52 (CN) SCHEMATIC DIAGRAM • Refer to page 3-5, 3-7 for IFX-52 BOARD printed wiring board.



MC-Service

SECTION 4
ADJUSTMENTS

4-1. PREPARATIONS BEFORE ADJUSTMENTS

Use the following measuring instruments for video section adjustment.

1. Equipment Required

1) TV monitor
2) Oscilloscope (dual-trace, band width of 30 MHz more with delay mode) (Unless otherwise specified, use a 10 : 1 probe.)
3) Pattern generator with video output terminal.
4) Regulated power supply
5) Adjustment remote commander (J-6082-053-B)

2. Removing Cabinets and Connections

1) Remove the four screws from the bottom panel and remove the cabinet (upper) block assembly.
2) Remove the flexible wiring board that is connected to CN701 of the IFX-52 board.
3) Remove the two screws (B3 × 10) from the rear panel and two screws (M2 × 6) securing the shield plate. Remove the cabinet (lower) assembly and the shield (upper).
4) Remove the four screws (M2 × 5) securing the IFX-52 board, and remove the IFX-52 board.
5) Connect the measuring instruments as shown in Fig. 4-1.

3. Checking the Input Signals

The video signal that is supplied from the pattern generator is used as the adjustment signal of the video section. Therefore, the video output signal must satisfy the given specifications.
Connect an oscilloscope to the video terminal of the AUDIO/VIDEO jack, and check that the sync signal amplitude of the video signal is approximately 0.286V, the amplitude of the video section is approximately 0.714V, the amplitude of the burst signal is approximately 0.286V and flat, and that the "red" amplitude of the chroma signal is approximately 0.67V.
The video signal used for adjusting the video section is shown in Fig. 4-2.

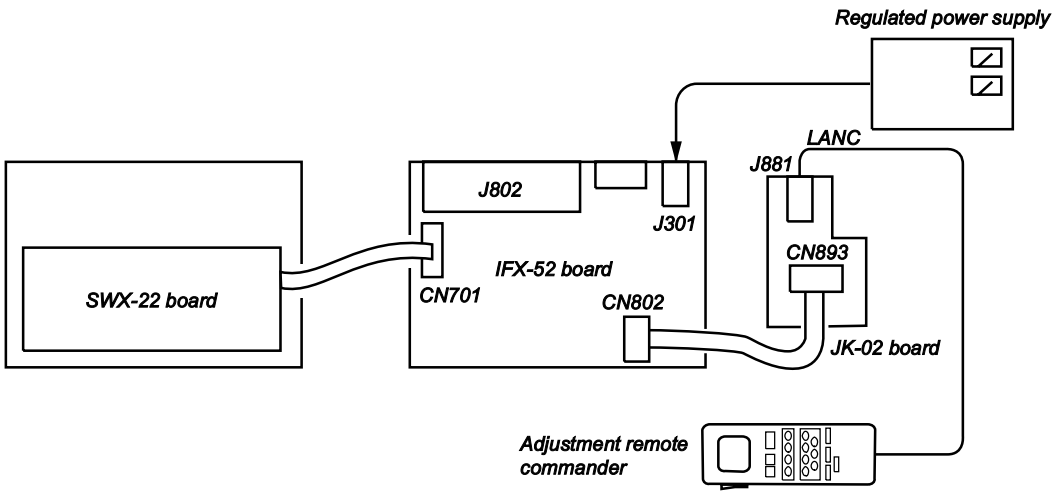


Fig. 4-1

Fig.4-2 shows the 75% color bar signals recorded on the alignment tape for Audio Operation Check.

Note: Measure with video terminal (Terminated at 75 Ω)

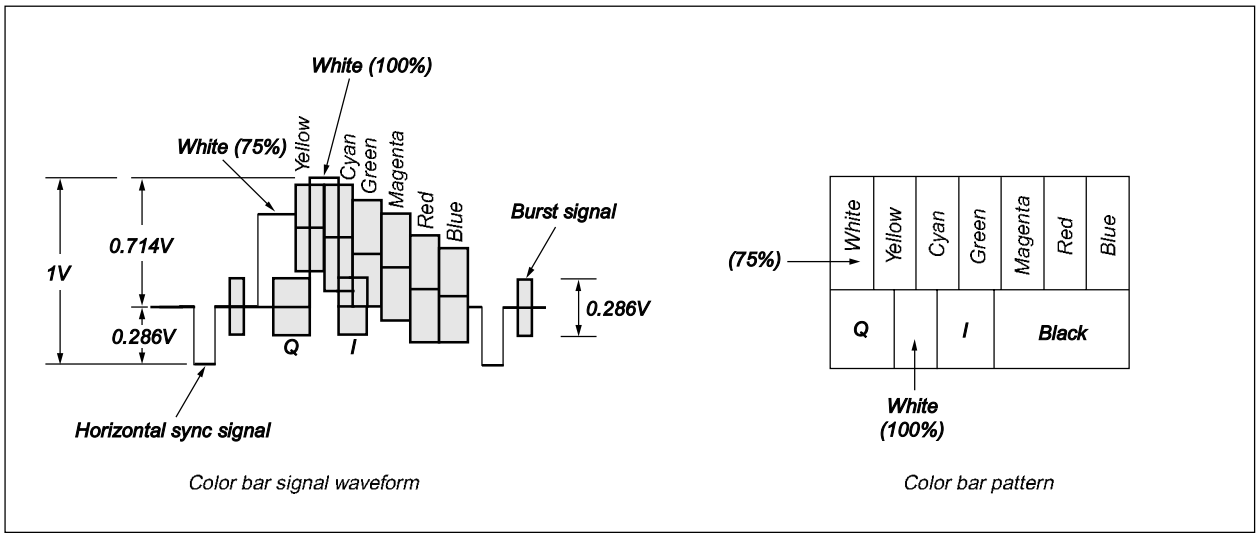


Fig. 4-2

4. Input/Output Level and Impedance

Video input
- Pin jack
- Video signal: 1Vp-p, 75 Ω unbalanced, sync negative

S video input
- 4-pin mini DIN
- Luminance signal: 1Vp-p, 75 Ω unbalanced, sync negative
- Chrominance signal :0.286 Vp-p, 75 Ω unbalanced

Audio input
- Pin jack
- Input level: 327mV
- Input impedance: 47kΩ or more

Video output
- Pin jack
- Output signal: 1Vp-p, 75Ω unbalanced, sync negative

S video output
- 4-pin mini DIN
- Luminance signal: 1Vp-p, 75Ω unbalanced, sync negative
- Chrominance signal: 0.286Vp-p, 75Ω unbalanced, sync negative

Audio output
- Pin jack
- Output level: 327 mV (across 47Ω load)
- Output impedance: 10kΩ or less

4-2. INITIALIZATION OF C PAGE DATA

1. Initializing the C Page Data

Note: If the page C data is initialized, the following adjustments must be performed again.

1) Modification of C page data
   Be sure to read all of the "Fixed data-2" and take note of them before starting initialization. After the C page data is initialized, be sure to input the same data that has been noted before. (Refer to Table 4-1.)
2) Video system adjustment

Adjusting page	C
Adjusting Address	00 to DF

Initializing Method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 80, set data: 0C, and press the PAUSE button of the adjustment remote commander.
3) Check that the data of page: 3, address: 80 is changed to "1C".
4) Perform "Modification of C Page Data".

2. Modification of C Page Data

If the C Page data has been initialized, change the data of the "Fixed data-2" address shown in the following table by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different depending on destination. When you want to change the data, copy the data built in the same set of the same destiration.
   Note: If the different set is copied, the camcorder may not operate.
3) To chang the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of C Page data

1) Select page: 2, address: 00, and set data: 29.
2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.

3. C Page Table

Note: Fixed data-1 : Initialized data. (Refer to "1. Initializing the C Page Data".)
Fixed data-2 : Modified data. (Refer to "2. Modification of C PAGE Data").

Address	Initial value	Remark
00 to 24		Fixed data-1 (Initialized data)
25	88	S VIDEO output Y level adj.
26	E3	S VIDEO output Cr level adj.
27	A1	S VIDEO output Cb level adj.
28 to 2A		Fixed data-1 (Initialized data)
2B	04	Chroma BPF fo adj.
2C to 30		Fixed data-1 (Initialized data)
31 to 33		Fixed data-2
34 to A9		Fixed data-1 (Initialized data)
AA	80	PLL adj.
AB to DF		Fixed data-1 (Initialized data)
E0 to FF		

Table. 4-1

[Regarding difference between the LANC-M mode and the LANC-S mode]

The LANC operation has the two modes: One is the LANC-M (LANC Master) mode and the other is the LANC-S (LANC Slave) mode.

LANC-M: In this mode, this machine controls the other machines that are connected to this machine.
LANC-S: In this mode, this machine is controlled by the other machine.

The DVMC-DA2 operates normally in the LANC-M mode.
However, the LANC-S mode must be selected in order to perform adjustment (enter the service mode).
Use either one of the following two procedures to select the LANC-S mode.

Procedure 1
1) Turn off the main power.
2) Establish a short circuit between CN905 pin-⑱ and pin-⑳ on the IFX-52 board.
3) Insert the RM-95 into J881 (LANC JACK). Push to slide the HOLD switch of the RM-95 to its right.
4) Supply an external DC 6 V to J301 (DC JACK).
5) The LCD panel on the RM-95 turns on and the LANC-S mode starts up. Perform the desired adjustments.
6) After the adjustments are complete, turn off the main power. Remove a short circuit between CN905 pin-⑱ and pin-⑳ on the IFX-52 board.

Procedure 2
1) Turn off the main power.
2) Insert the RM-95 into J881 (LANC JACK). Push to slide the HOLD switch of the RM-95 to its right.
3) Supply an external DC 6 V to J301 (DC JACK).
4) Wait for about five seconds.
5) While pressing the ANALOG IN button and the DV IN button at the same time for two seconds or longer, press the POWER button.
6) The LCD panel on the RM-95 turns on and the LANC-S mode starts up. Perform the desired adjustments.
7) The main power cannot be turned off by pressing the POWER button while the machine is in the LANC-S mode.
   Turn off the main power either by sliding the HOLD switch of the RM-95 to its left, or by unplugging the AC adaptor from J301 (DC JACK).

Note: There can be a case that the machine cannot enter the LANC-S mode due to chattering of the switch button in step 2. However, make attempt several times to enter the LANC-S mode.

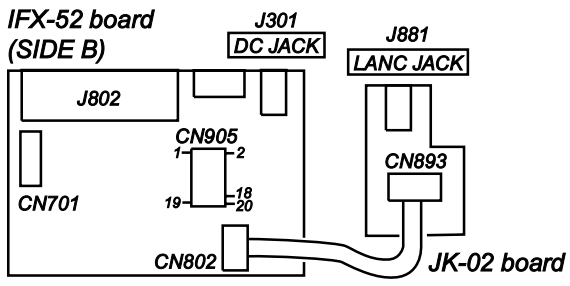


Fig. 4-3

4-3. INITIALIZATION OF D PAGE DATA

1. Initializing the D Page Data

Note: If the page D data is initialized, the following adjustments must be performed again.
1) Modification of D page data
   Be sure to read all of the "Fixed data-2" and take note of them before starting initialization. After the C page data is initialized, be sure to input the same data that has been noted before.
   (Refer to Table 4-2.)

Adjusting page	C
Adjusting Address	00 to 8F

Initializing Method:
1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 80, set data: 0D, and press the PAUSE button of the adjustment remote commander.
3) Check that the data of page: 3, address: 80 is changed to "1D".
4) Perform "Modification of D Page Data".

2. Modification of D Page Data

If the D Page data has been initialized, change the data of the "Fixed data-2" address shown in the following table by manual input.

Modifying Method:
1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different depending on destination. When you want to change the data, copy the data built in the same set of the same destiration.
   Note: If the different set is copied, the camcorder may not operate.
3) To chang the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of C Page data
1) Select page: 2, address: 00, and set data: 29.
2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.

3. D Page Table

Note: Fixed data-1 : Initialized data. (Refer to "1. Initializing the D Page Data".)
Fixed data-2 : Modified data. (Refer to "2. Modification of D PAGE Data").

Address	Initial value	Remark
00 to 8F	Fixed data-1 (Initialized data)	
90 to FF		

Table. 4-2

4-4. VIDEO SYSTEM ADJUSTMENTS

Connection of Video System Measuring Instruments

Connect the video system measuring instruments as shown in Fig. 4-4.

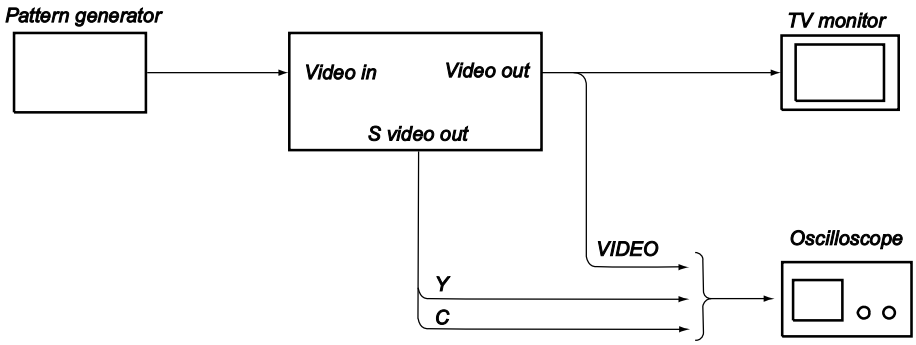


Fig. 4-4

1. Chroma BPF f0 Adjustment

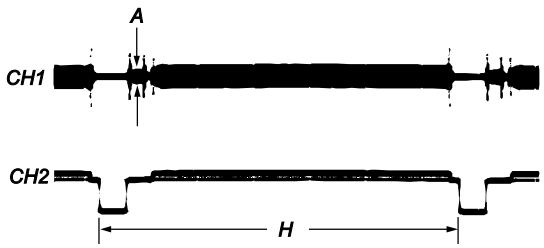
Set the center frequency of IC001 chroma band-pass filter.

Mode	Digital EE
Signal	No signal
Measurement Point	CH1: Chroma signal terminal of S VIDEO jack (75 Ω terminated) CH2: Y signal terminal of S VIDEO jack (75 Ω terminated)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	2B
Specified Value	A = 100mVp-p or less B = 200mVp-p or more

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 56, set data: 00, and press the PAUSE button of the adjustment remote commander. (digital EE mode)
3) Check that the burst signal (B) is output to the chroma signal terminal.
4) Select page: 3, address: 0C, set data: 04, and press the PAUSE button of the adjustment remote commander.
5) Select page: C, address: 2B, and change the data (in the range of 00 to 07) for minimum amplitude of the burst signal level (A).
6) Press the PAUSE button of the adjustment remote commander.
7) Select page: 3, address: 0C, set data: 00, and press the PAUSE button of the adjustment remote commander.
8) Check that the burst signal level (B) is satisfied the specified value.
9) Select page: C, address: 56, set data: 08, and press the PAUSE button of the adjustment remote commander.
10) Select page: 0, address: 01, and set data: 00.

When the page: 3, address: 0C data is 04:



When the page: 3, address: 0C data 00.

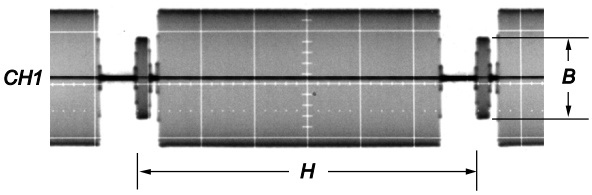


Fig. 4-5

MC-Service

2. S-VIDEO OUT Y Level Adjustment

Mode	VTR, Digital EE
Signal	No signal
Measurement Point	Y signal terminal of S VIDEO jack (75 Ω terminated)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	25
Specified Value	A = 1000 ± 14mVp-p

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 48, set data: 06, and press the PAUSE button of the adjustment remote commander. (VTR mode)
3) Select page: C, address: 56, set data: 00, and press the PAUSE button of the adjustment remote commander. (digital EE mode)
4) Select page: 2, address: 35. After note down the data of this address, set data: 01 to the address.
5) Select page: 3, address: 0C, set data: 02, and press the PAUSE button of the adjustment remote commander.
6) Select page: C, address: 25, change the data and set the Y signal level (A) to the specified value.
7) Press the PAUSE button of the adjustment remote commander.
8) Select page: 3, address: 0C, set data: 00, and press the PAUSE button of the adjustment remote commander.
9) Select page: 2, address: 35. and set the data that is noted down at step 4).
10) Select page: C, address: 48, set data: 00, and press the PAUSE button of the adjustment remote commander.
11) Select page: C, address: 56, set data: 08, and press the PAUSE button of the adjustment remote commander.
12) Select page: 0, address: 01, and set data: 00.

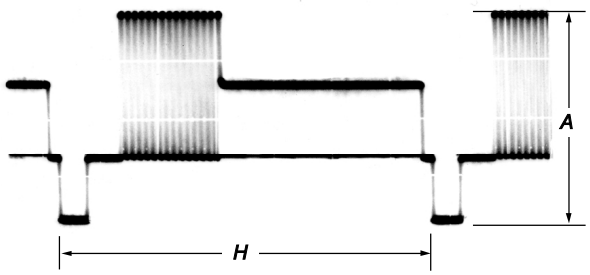


Fig. 4-6

3. S-VIDEO OUT Cr, Cb Level Adjustment

Mode	VTR, Digital EE
Signal	No signal
Measurement Point	Chroma signal terminal of S VIDEO jack (75 Ω terminated) External trigger: Y signal terminal of S VIDEO jack
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	26, 27
Specified Value	Cr level: A = 714 ± 14mVp-p Cb level: B = 714 ± 14mVp-p Burst level: C = 286 ± 16mVp-p

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 48, set data: 06, and press the PAUSE button of the adjustment remote commander. (VTR mode)
3) Select page: C, address: 56, set data: 00, and press the PAUSE button of the adjustment remote commander. (digital EE mode)
4) Select page: 2, address: 35. After note down the data of this address, set data: 01 to the address.
5) Select page: 3, address: 0C, set data: 02, and press the PAUSE button of the adjustment remote commander.
6) Select page: C, address: 26, change the data to adjust the Cr signal level (A) to the specified value.
7) Press the PAUSE button of the adjustment remote commander.
8) Select page: C, address: 27, change the data to adjust the Cb signal level (B) to the specified value.
9) Press the PAUSE button of the adjustment remote commander.
10) Check that the burst signal level (C) is satisfied the specified value.
11) Select page: 3, address: 0C, set data: 00, and press the PAUSE button of the adjustment remote commander.
12) Select page: 2, address: 35, and set the data that is noted down at step 4).
13) Select page: C, address: 48, set data: 00, and press the PAUSE button of the adjustment remote commander.
14) Select page: C, address: 56, set data: 08, and press the PAUSE button of the adjustment remote commander.
15) Select page: 0, address: 01, and set data: 00.

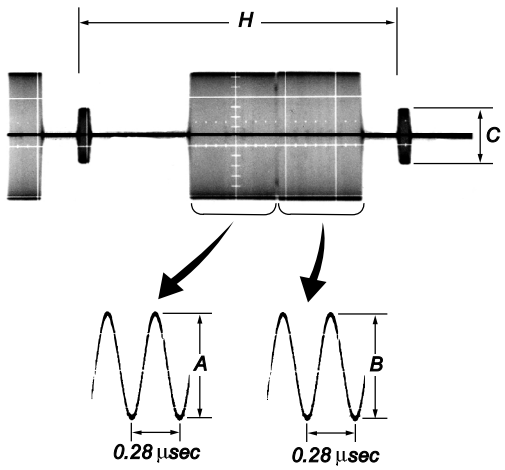


Fig. 4-7

4. VIDEO OUT Sync Level and Burst Level Check

Mode	Digital EE
Signal	No signal
Measurement Point	Measurement Point Video out terminal (75Ωterminated)
Measuring Instrument	Oscilloscope
Specified Value	Sync signal level: A = 286 ±20 mVp-p Burst signal level: B = 286 ±30 mVp-p

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 56, set data: 00, and press the PAUSE button of the adjustment remote commander. (digital EE mode)
3) Check that the sync signal level (A) satisfies the specified value.
4) Check that the burst signal level (B) satisfies the specified value.
5) Select page: C, address: 56, set data: 08, and press the PAUSE button of the adjustment remote commander.
6) Select page: 0, address: 01, and set data: 00.

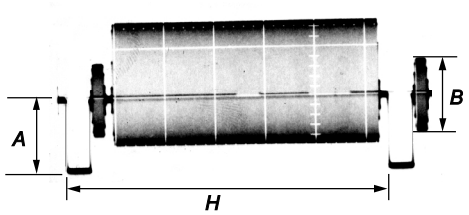


Fig. 4-8

5. PLL Adjustment

Set the VCO center level of the video input circuit (IC102).

Mode	Digital EE
Signal	Color bar (VIDEO IN terminal input) <3.579545 MHz ±10Hz>
Measurement Point	Display data of page: 3, address: 04
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	AA
Specified Value	0A

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 56, set data: 00, and press the PAUSE button of the adjustment remote commander. (digital EE mode)
3) Select page: 3, address: 0C, set data: 80, and press the PAUSE button of the adjustment remote commander.
4) Select page: C, address: AA, and set data: 00, and press the PAUSE button.
5) Select page: 3, address: 04, and check. If the data is “0A” , proceed to step 8).
6) Select page: C, address: AA, add “10”(hexadecimal) to the data and press the PAUSE button.
7) Select page: 3, address: 04, and check the data is “0A” . If not repeat step 7).
8) Select page: 3, address: 0C, set data: 00, and press the PAUSE button of the adjustment remote commander.
9) Select page: C, address: 56, set data: 08, and press the PAUSE button of the adjustment remote commander.
10) Select page: 0, address: 01, and set data: 00.

4-5. SERVICE MODE

ADJUSTMENT REMOTE COMMANDER

The adjustment remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjustment remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Using the adjustment remote commander

1) Connect the adjustment remote commander to the LANC terminal.
2) Set the HOLD switch of the adjustment remote commander to "HOLD" (SERVICE position). If it has been properly connected, the LCD on the adjustment remote commander will display as shown in Fig. 4-9.

Fig. 4-9

3) Operate the adjustment remote commander as follows.
   - Changing the page
     The page increases when the EDIT SEARCH+ button is pressed, and decreases when the EDIT SEARCH– button is pressed. There are altogether 16 pages, from 0 to F.

Hexadecimal notation	0 1 2 3 4 5 6 7 8 9 A B C D E F
LCD Display	0 1 2 3 4 5 6 7 8 9 A b c d E F
Decimal notation conversion value	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

   - Changing the address
     The address increases when the FF (▶▶) button is pressed, and decreases when the REW (◀◀) button is pressed. There are altogether 256 addresses, from 00 to FF.
   - Changing the data (Data setting)
     The data increases when the PLAY (►) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
   - Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data (B, C, D, F page) in the nonvolatile memory. (The new adjusting data will not be recorded in the nonvolatile memory if this step is not performed.)
4) After completing all adjustments, turn off the main power supply (8.4V) once.

2. Precautions upon using the adjustment remote commander

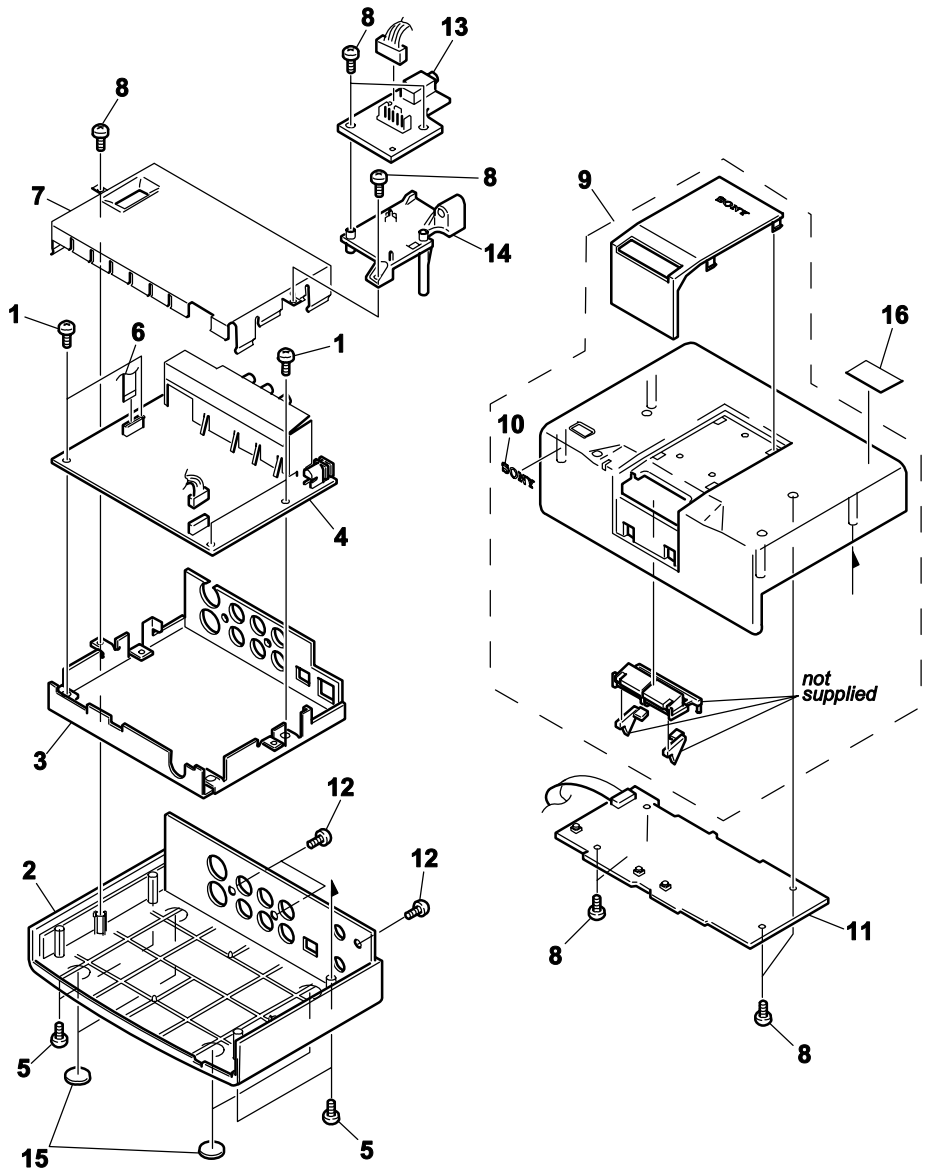
Mishandling of the adjustment remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

SECTION 5
REPAIR PARTS LIST

5-1. EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.



Ref. No.	Part No.	Description	Remarks
1	4-639-967-01	SCREW, 0 PLATE SPECIAL HEAD	
2	X-4622-479-1	CABINET (LOWER) ASSY	
* 3	4-639-053-11	SHIELD (LOWER)	
4	A-8056-554-A	IFX-52 BOARD, COMPLETE	
5	4-982-491-01	SCREW (2X8) TAPPING	
6	1-790-197-11	FFC(IF-SW)	
* 7	4-639-054-02	SHIELD (UPPER)	
8	4-641-086-01	TAPPING, PRECISION	
9	A-8046-118-A	CABINET (UPPER) BLOCK ASSY	
10	4-942-636-21	EMBLEM (NO 3.5) SONY	
11	A-8054-858-A	SWX-22 BOARD, COMPLETE	
12	7-685-647-74	+BV3X10	
13	A-8056-556-A	JK-02 BOARD, COMPLETE	
* 14	4-644-562-01	STAY, RANK	
15	4-641-233-01	FOOT, RUBBER	
16	4-640-530-01	STICKER, I.LINK	

5-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH

When indicating parts by reference number, please include the board name.

- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
	A-8056-554-A	IFX-52 BOARD,COMPLETE			
		**********			
*	4-639-140-01	PLATE,JACK GROUND			
		< CAPACITOR >			
C001	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V
C002	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C003	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C004	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C005	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C006	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C007	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C008	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C009	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V
C010	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C014	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C015	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C016	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C017	1-135-099-91	TANTALUM CHIP	2.2uF	20%	6.3V
C019	1-125-899-11	TANTALUM CHIP	220uF	20%	4V
C020	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C021	1-135-099-91	TANTALUM CHIP	2.2uF	20%	6.3V
C022	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C023	1-125-899-11	TANTALUM CHIP	220uF	20%	4V
C024	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C025	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C026	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C027	1-164-858-11	CERAMIC CHIP	22PF	5%	16V
C101	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C102	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C103	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C104	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C105	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C106	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C107	1-164-856-81	CERAMIC CHIP	18PF	5%	16V
C108	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C109	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C110	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C111	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C112	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C113	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C115	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C116	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C117	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C118	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C119	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C120	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C121	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C123	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C124	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C125	1-164-856-81	CERAMIC CHIP	18PF	5%	16V
C126	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C127	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C128	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C129	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C130	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C131	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C132	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C133	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C134	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C135	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C136	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C137	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C203	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C204	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C207	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C208	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C209	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C210	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C211	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C215	1-107-686-11	TANTALUM CHIP	4.7uF	20%	16V
C217	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C219	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C221	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C222	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C225	1-135-099-91	TANTALUM CHIP	2.2uF	20%	6.3V
C226	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C229	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C230	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C231	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C232	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C233	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C234	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C235	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C236	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C237	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C238	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C239	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C240	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C242	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description			Remarks
C243	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C244	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C245	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C247	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C248	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C249	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C250	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C301	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C302	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C303	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C304	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C305	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C306	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C307	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C308	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C309	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C310	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C311	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C312	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C313	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C314	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C315	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C319	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C324	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C329	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C332	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C333	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C334	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C335	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C336	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C337	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C338	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C339	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C340	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C341	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C342	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C343	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C344	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C345	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C346	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C347	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C348	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C349	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C350	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C351	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C352	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C353	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C355	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C356	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C357	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C359	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C361	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V

Ref. No.	Part No.	Description			Remarks
C362	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C401	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C402	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C403	1-125-899-11	TANTALUM CHIP	220uF	20%	4V
C404	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C405	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C406	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C407	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C501	1-135-099-91	TANTALUM CHIP	2.2uF	20%	6.3V
C502	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C503	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C504	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C505	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C506	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C507	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C508	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C509	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C510	1-218-945-11	RES,CHIP	220	5%	1/16W
C511	1-164-852-11	CERAMIC CHIP	12PF	5%	16V
C512	1-164-852-11	CERAMIC CHIP	12PF	5%	16V
C513	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C514	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C515	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C516	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C517	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C519	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C521	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C522	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C523	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C601	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C602	1-164-852-11	CERAMIC CHIP	12PF	5%	16V
C603	1-164-852-11	CERAMIC CHIP	12PF	5%	16V
C604	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C605	1-218-945-11	RES,CHIP	220	5%	1/16W
C606	1-218-945-11	RES,CHIP	220	5%	1/16W
C701	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C702	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C703	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C704	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C705	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C706	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C707	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C708	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C709	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C712	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C713	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C714	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C715	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C801	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
		< CONNECTOR >			
CN701	1-770-305-11	CONNECTOR,FFC/FPC 10P			
CN801	1-779-523-11	CONNECTOR,SQUARE TYPE (INDI) 4P			(DV IN/OUT)
CN802	1-573-290-21	PIN CONNECTOR (1.5MM) (SMD) 4P			
CN905	1-750-321-41	CONNECTOR,BOARD TO BOARD 20P			

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Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D101	8-719-071-32	DIODE HVC350BTRF	
D102	8-719-071-32	DIODE HVC350BTRF	
D302	8-719-066-34	DIODE RB461F-T106	
D303	8-719-066-34	DIODE RB461F-T106	
D304	8-719-066-16	DIODE RB491D-T146	
D501	8-719-055-86	DIODE KV1470TL1-3	
D701	8-719-421-27	DIODE MA728-TX	
D702	8-719-056-23	DIODE MA2S111-(K8).SO	
D703	8-719-064-61	DIODE 01BZA8.2(TE85L)	
D705	8-719-064-61	DIODE 01BZA8.2(TE85L)	
D706	8-719-064-61	DIODE 01BZA8.2(TE85L)	
D707	8-719-064-61	DIODE 01BZA8.2(TE85L)	
D801	8-719-064-61	DIODE 01BZA8.2(TE85L)	
D802	8-719-064-61	DIODE 01BZA8.2(TE85L)	
		< FUSE >	
⚠F301	1-533-760-21	FUSE (SMD)(1.4A)	
		< FERRITE BEAD >	
* FB301	1-500-449-21	BEAD,FERRITE 0UH	
* FB302	1-500-449-21	BEAD,FERRITE 0UH	
FB739	1-414-555-21	FERRITE,EMI 0UH	
FB740	1-414-555-21	FERRITE,EMI 0UH	
FB741	1-414-555-21	FERRITE,EMI 0UH	
FB742	1-414-555-21	FERRITE,EMI 0UH	
FB743	1-414-555-21	FERRITE,EMI 0UH	
FB744	1-414-555-21	FERRITE,EMI 0UH	
* FB746	1-469-092-11	FERRITE,EMI 0UH	
* FB747	1-469-092-11	FERRITE,EMI 0UH	
FB748	1-414-555-21	FERRITE,EMI 0UH	
FB801	1-469-108-21	FERRITE,EMI 0UH	
FB802	1-469-108-21	FERRITE,EMI 0UH	
FB803	1-469-108-21	FERRITE,EMI 0UH	
FB804	1-469-108-21	FERRITE,EMI 0UH	
FB805	1-469-311-22	BEAD,FERRITE 0UH	
FB806	1-500-113-22	BEAD,FERRITE 0UH	
FB807	1-469-311-22	BEAD,FERRITE 0UH	
FB808	1-469-311-22	BEAD,FERRITE 0UH	
FB809	1-469-311-22	BEAD,FERRITE 0UH	
FB810	1-469-311-22	BEAD,FERRITE 0UH	
FB811	1-469-311-22	BEAD,FERRITE 0UH	
FB812	1-500-113-22	BEAD,FERRITE 0UH	
FB813	1-500-113-22	BEAD,FERRITE 0UH	
FB814	1-500-113-22	BEAD,FERRITE 0UH	
FB815	1-500-113-22	BEAD,FERRITE 0UH	
FB816	1-469-311-22	BEAD,FERRITE 0UH	
FB817	1-469-311-22	BEAD,FERRITE 0UH	
FB818	1-469-311-22	BEAD,FERRITE 0UH	
FB819	1-469-311-22	BEAD,FERRITE 0UH	
		< FILTER >	
FL101	1-234-177-21	FERRITE,CHIP EMI	
FL301	1-233-893-11	FERRITE,CHIP EMI	
FL401	1-234-177-21	FERRITE,CHIP EMI	
FL402	1-234-177-21	FERRITE,CHIP EMI	
FL404	1-234-177-21	FERRITE,CHIP EMI	
FL501	1-234-177-21	FERRITE,CHIP EMI	
FL503	1-234-177-21	FERRITE,CHIP EMI	
FL504	1-234-177-21	FERRITE,CHIP EMI	
FL505	1-234-177-21	FERRITE,CHIP EMI	
FL601	1-234-177-21	FERRITE,CHIP EMI	
FL701	1-234-177-21	FERRITE,CHIP EMI	
		< IC >	
IC001	8-759-534-25	IC AN2222FBQ-EB	
IC002	8-759-432-78	IC MM1111XFBE	
IC101	8-759-430-57	IC M62367GP-75ED	
IC102	8-759-579-81	IC SC371053AFTAEB	
IC201	8-759-583-66	IC AN2902FHQBEB	
IC202	8-759-524-60	IC AK4512-VF-E2	
IC301	8-759-060-93	IC MB3785APFV-G-BND-ER	
IC401	8-759-584-66	IC M65511AWG-600D	
IC501	8-759-584-36	IC HG73C050BPTL	
IC502	8-752-394-00	IC CXD3129R-T6	
IC503	8-759-566-52	IC SN104266PN-TEB	
IC601	8-759-653-34	IC MB91191RPFF-G-151-BND-ER	
IC602	8-759-445-94	IC AK6480AM-E2	
IC701	8-759-424-79	IC S-8423YFS-T2	
IC702	8-759-536-45	IC TL1596CPW-ELM2000	
IC703	8-759-653-33	IC S579195PZ-TEB	
IC704	8-759-524-29	IC TC74VHC257FT(EL)	
		< JACK >	
J301	1-770-443-11	JACK,DC(POLARITY UNIFIED TYPE)(DC IN 6V)	
J802	1-785-511-11	AV JACK(S-VIDEO/VIDEO/AUDIO)	
		< INDUCTOR >	
L001	1-414-754-11	INDUCTOR 10uH	
L002	1-414-754-11	INDUCTOR 10uH	
L101	1-414-754-11	INDUCTOR 10uH	
L102	1-414-757-11	INDUCTOR 100uH	
L103	1-412-957-11	INDUCTOR,SMALL TYPE 33uH	
L104	1-412-943-81	INDUCTOR 2.2uH	
L105	1-412-957-11	INDUCTOR,SMALL TYPE 33uH	
L106	1-414-754-11	INDUCTOR 10uH	
L201	1-414-754-11	INDUCTOR 10uH	
L202	1-414-754-11	INDUCTOR 10uH	
L203	1-414-754-11	INDUCTOR 10uH	
L305	1-416-345-11	COIL,CHOKE 22uH	
L306	1-416-345-11	COIL,CHOKE 22uH	
L307	1-416-345-11	COIL,CHOKE 22uH	
L308	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L309	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L310	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L311	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L312	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L313	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L314	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L315	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L316	1-412-056-11	INDUCTOR(SMD) 4.7uH	
L401	1-414-757-11	INDUCTOR 100uH	
* L402	1-414-482-21	INDUCTOR CHIP 82NH	

Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
L403	1-414-757-11	INDUCTOR	100uH		
L501	1-414-754-11	INDUCTOR	10uH		
L502	1-414-754-11	INDUCTOR	10uH		
L503	1-414-754-11	INDUCTOR	10uH		
L504	1-412-941-11	INDUCTOR	1.5uH		
L505	1-414-754-11	INDUCTOR	10uH		
L601	1-414-754-11	INDUCTOR	10uH		
L701	1-414-754-11	INDUCTOR	10uH		
		< LINE FILTER >			
LF301	1-411-957-11	FILTER,COMMON MODE			
		< IC LINK >			
⚠PS701	1-576-122-21	LINK,IC 0.4A			
		< TRANSISTOR >			
Q003	8-729-042-70	TRANSISTOR	UN9211J-(K8).SO		
Q004	8-729-042-28	TRANSISTOR	2SD2216J-QR(K8).SO		
Q101	8-729-807-94	TRANSISTOR	2SB1295-UL5-TB		
Q102	8-729-042-73	TRANSISTOR	UN9215J-(K8).SO		
Q103	8-729-042-28	TRANSISTOR	2SD2216J-QR(K8).SO		
Q104	8-729-042-26	TRANSISTOR	2SB1462J-QR(K8).SO		
Q105	8-729-042-28	TRANSISTOR	2SD2216J-QR(K8).SO		
Q106	8-729-042-28	TRANSISTOR	2SD2216J-QR(K8).SO		
Q107	8-729-042-28	TRANSISTOR	2SD2216J-QR(K8).SO		
Q108	8-729-042-28	TRANSISTOR	2SD2216J-QR(K8).SO		
Q109	8-729-042-26	TRANSISTOR	2SB1462J-QR(K8).SO		
Q110	8-729-807-94	TRANSISTOR	2SB1295-UL5-TB		
Q201	8-729-042-32	TRANSISTOR	UN9113J-(K8).SO		
Q202	8-729-042-69	TRANSISTOR	UN9210J-(K8).SO		
Q203	8-729-042-69	TRANSISTOR	UN9210J-(K8).SO		
Q205	8-729-041-23	TRANSISTOR	NDS356AP		
Q206	8-729-042-31	TRANSISTOR	UN9213J-(K8).SO		
Q207	8-729-041-23	TRANSISTOR	NDS356AP		
Q208	8-729-042-31	TRANSISTOR	UN9213J-(K8).SO		
Q209	8-729-042-70	TRANSISTOR	UN9211J-(K8).SO		
Q302	8-729-043-94	TRANSISTOR	CPH3106-PM-TL		
Q303	8-729-043-94	TRANSISTOR	CPH3106-PM-TL		
Q304	8-729-043-94	TRANSISTOR	CPH3106-PM-TL		
Q305	8-729-041-23	TRANSISTOR	NDS356AP		
Q306	8-729-042-31	TRANSISTOR	UN9213J-(K8).SO		
Q307	8-729-042-31	TRANSISTOR	UN9213J-(K8).SO		
Q308	8-729-041-23	TRANSISTOR	NDS356AP		
Q701	8-729-042-58	TRANSISTOR	UN9111J-(K8).SO		
Q702	8-729-042-70	TRANSISTOR	UN9211J-(K8).SO		
Q703	8-729-042-70	TRANSISTOR	UN9211J-(K8).SO		
Q704	8-729-042-70	TRANSISTOR	UN9211J-(K8).SO		
Q705	8-729-042-70	TRANSISTOR	UN9211J-(K8).SO		
Q951	8-729-042-72	TRANSISTOR	UN9214J-(K8).SO		
		< RESISTOR >			
R002	1-218-965-11	RES,CHIP	10K	5%	1/16W
R003	1-218-941-11	RES,CHIP	100	5%	1/16W
R004	1-218-969-11	RES,CHIP	22K	5%	1/16W
R005	1-218-953-11	RES,CHIP	1K	5%	1/16W
R006	1-218-990-11	CONDUCTOR,CHIP	0		

Ref. No.	Part No.	Description			Remarks
R007	1-218-953-11	RES,CHIP	1K	5%	1/16W
R008	1-218-990-11	CONDUCTOR,CHIP	0		
R009	1-218-990-11	CONDUCTOR,CHIP	0		
R010	1-218-969-11	RES,CHIP	22K	5%	1/16W
R011	1-218-941-11	RES,CHIP	100	5%	1/16W
R012	1-218-941-11	RES,CHIP	100	5%	1/16W
R013	1-218-941-11	RES,CHIP	100	5%	1/16W
R014	1-218-953-11	RES,CHIP	1K	5%	1/16W
R015	1-218-953-11	RES,CHIP	1K	5%	1/16W
R016	1-218-965-11	RES,CHIP	10K	5%	1/16W
R017	1-218-939-11	RES,CHIP	68	5%	1/16W
R018	1-218-939-11	RES,CHIP	68	5%	1/16W
R019	1-218-939-11	RES,CHIP	68	5%	1/16W
R020	1-218-981-11	RES,CHIP	220K	5%	1/16W
R021	1-218-941-11	RES,CHIP	100	5%	1/16W
R023	1-218-961-11	RES,CHIP	4.7K	5%	1/16W
R024	1-218-961-11	RES,CHIP	4.7K	5%	1/16W
R028	1-218-953-11	RES,CHIP	1K	5%	1/16W
R029	1-218-957-11	RES,CHIP	2.2K	5%	1/16W
R030	1-218-939-11	RES,CHIP	68	5%	1/16W
R031	1-218-989-11	RES,CHIP	1M	5%	1/16W
R101	1-218-973-11	RES,CHIP	47K	5%	1/16W
R102	1-218-965-11	RES,CHIP	10K	5%	1/16W
R103	1-218-953-11	RES,CHIP	1K	5%	1/16W
R104	1-218-959-11	RES,CHIP	3.3K	5%	1/16W
R105	1-218-957-11	RES,CHIP	2.2K	5%	1/16W
R106	1-218-953-11	RES,CHIP	1K	5%	1/16W
R107	1-218-979-11	RES,CHIP	150K	5%	1/16W
R108	1-218-959-11	RES,CHIP	3.3K	5%	1/16W
R109	1-218-965-11	RES,CHIP	10K	5%	1/16W
R110	1-218-953-11	RES,CHIP	1K	5%	1/16W
R111	1-218-990-11	CONDUCTOR,CHIP	0		
R112	1-218-953-11	RES,CHIP	1K	5%	1/16W
R113	1-218-977-11	RES,CHIP	100K	5%	1/16W
R114	1-218-989-11	RES,CHIP	1M	5%	1/16W
R115	1-218-977-11	RES,CHIP	100K	5%	1/16W
R116	1-218-977-11	RES,CHIP	100K	5%	1/16W
R117	1-218-965-11	RES,CHIP	10K	5%	1/16W
R118	1-218-965-11	RES,CHIP	10K	5%	1/16W
R119	1-218-977-11	RES,CHIP	100K	5%	1/16W
R120	1-218-950-11	RES,CHIP	560	5%	1/16W
R121	1-216-864-11	RES,CHIP	0	5%	1/16W
R122	1-218-953-11	RES,CHIP	1K	5%	1/16W
R123	1-218-952-11	RES,CHIP	820	5%	1/16W
R124	1-218-965-11	RES,CHIP	10K	5%	1/16W
R127	1-218-990-11	CONDUCTOR,CHIP	0		
R128	1-218-990-11	CONDUCTOR,CHIP	0		
R201	1-218-953-11	RES,CHIP	1K	5%	1/16W
R202	1-218-953-11	RES,CHIP	1K	5%	1/16W
R203	1-218-973-11	RES,CHIP	47K	5%	1/16W
R204	1-218-973-11	RES,CHIP	47K	5%	1/16W
R205	1-218-965-11	RES,CHIP	10K	5%	1/16W
R206	1-218-965-11	RES,CHIP	10K	5%	1/16W
R207	1-218-973-11	RES,CHIP	47K	5%	1/16W
R209	1-218-990-11	CONDUCTOR,CHIP	0		

Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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Ref. No.	Part No.	Description			Remarks
R210	1-218-941-11	RES,CHIP	100	5%	1/16W
R212	1-218-949-11	RES,CHIP	470	5%	1/16W
R213	1-218-941-11	RES,CHIP	100	5%	1/16W
R214	1-218-949-11	RES,CHIP	470	5%	1/16W
R215	1-218-990-11	CONDUCTOR,CHIP	0		
R216	1-218-990-11	CONDUCTOR,CHIP	0		
R217	1-218-990-11	CONDUCTOR,CHIP	0		
R219	1-218-989-11	RES,CHIP	1M	5%	1/16W
R220	1-218-979-11	RES,CHIP	150K	5%	1/16W
R221	1-218-989-11	RES,CHIP	1M	5%	1/16W
R222	1-218-979-11	RES,CHIP	150K	5%	1/16W
R223	1-218-990-11	CONDUCTOR,CHIP	0		
R301	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R302	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R303	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R304	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R305	1-218-979-11	RES,CHIP	150K	5%	1/16W
R306	1-218-981-11	RES,CHIP	220K	5%	1/16W
R307	1-208-895-81	RES,CHIP	2.2K	0.50%	1/16W
R308	1-218-981-11	RES,CHIP	220K	5%	1/16W
R309	1-218-957-11	RES,CHIP	2.2K	5%	1/16W
R310	1-218-957-11	RES,CHIP	2.2K	5%	1/16W
R312	1-208-905-81	RES,CHIP	5.6K	0.50%	1/16W
R313	1-218-974-11	RES,CHIP	56K	5%	1/16W
R315	1-218-955-11	RES,CHIP	1.5K	5%	1/16W
R316	1-218-951-11	RES,CHIP	680	5%	1/16W
R317	1-208-899-81	RES,CHIP	3.3K	0.50%	1/16W
R318	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R319	1-216-023-00	RES,CHIP	82	5%	1/10W
R320	1-218-969-11	RES,CHIP	22K	5%	1/16W
R321	1-216-023-00	RES,CHIP	82	5%	1/10W
R322	1-216-023-00	RES,CHIP	82	5%	1/10W
R325	1-218-967-11	RES,CHIP	15K	5%	1/16W
R328	1-218-974-11	RES,CHIP	56K	5%	1/16W
R331	1-216-296-91	CONDUCTOR,CHIP	0		
R333	1-218-965-11	RES,CHIP	10K	5%	1/16W
R334	1-216-296-91	CONDUCTOR,CHIP	0		
R337	1-218-990-11	CONDUCTOR,CHIP	0		
R338	1-218-990-11	CONDUCTOR,CHIP	0		
R339	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R340	1-208-903-81	RES,CHIP	4.7K	0.50%	1/16W
R342	1-208-921-81	RES,CHIP	27K	0.50%	1/16W
R344	1-208-927-11	RES,CHIP	47K	0.50%	1/16W
R345	1-218-949-11	RES,CHIP	470	5%	1/16W
R346	1-218-949-11	RES,CHIP	470	5%	1/16W
R347	1-218-949-11	RES,CHIP	470	5%	1/16W
R352	1-218-989-11	RES,CHIP	1M	5%	1/16W
R353	1-218-977-11	RES,CHIP	100K	5%	1/16W
R354	1-218-989-11	RES,CHIP	1M	5%	1/16W
R355	1-218-977-11	RES,CHIP	100K	5%	1/16W
R359	1-218-990-11	CONDUCTOR,CHIP	0		
R360	1-218-953-11	RES,CHIP	1K	5%	1/16W
R362	1-218-990-11	CONDUCTOR,CHIP	0		
R363	1-218-953-11	RES,CHIP	1K	5%	1/16W
R364	1-218-953-11	RES,CHIP	1K	5%	1/16W
R365	1-218-953-11	RES,CHIP	1K	5%	1/16W
R366	1-218-990-11	CONDUCTOR,CHIP	0		
R367	1-208-883-81	RES,CHIP	680	0.50%	1/16W
R368	1-218-990-11	CONDUCTOR,CHIP	0		
R369	1-218-990-11	CONDUCTOR,CHIP	0		

Ref. No.	Part No.	Description			Remarks
R370	1-216-295-91	CONDUCTOR,CHIP	0		
R401	1-216-864-11	RES,CHIP	0	5%	1/16W
R402	1-218-977-11	RES,CHIP	100K	5%	1/16W
R403	1-218-959-11	RES,CHIP	3.3K	5%	1/16W
R404	1-218-959-11	RES,CHIP	3.3K	5%	1/16W
R405	1-216-864-11	RES,CHIP	0	5%	1/16W
R406	1-218-990-11	CONDUCTOR,CHIP	0		
R407	1-218-965-11	RES,CHIP	10K	5%	1/16W
R408	1-218-965-11	RES,CHIP	10K	5%	1/16W
R409	1-218-965-11	RES,CHIP	10K	5%	1/16W
R410	1-218-951-11	RES,CHIP	680	5%	1/16W
R411	1-218-947-11	RES,CHIP	330	5%	1/16W
R416	1-218-990-11	CONDUCTOR,CHIP	0		
R417	1-218-965-11	RES,CHIP	10K	5%	1/16W
R418	1-218-965-11	RES,CHIP	10K	5%	1/16W
R419	1-218-965-11	RES,CHIP	10K	5%	1/16W
R501	1-218-937-11	RES,CHIP	47	5%	1/16W
R502	1-218-961-11	RES,CHIP	4.7K	5%	1/16W
R503	1-218-947-11	RES,CHIP	330	5%	1/16W
R504	1-218-965-11	RES,CHIP	10K	5%	1/16W
R505	1-218-965-11	RES,CHIP	10K	5%	1/16W
R506	1-218-990-11	CONDUCTOR,CHIP	0		
R507	1-218-990-11	CONDUCTOR,CHIP	0		
R508	1-218-990-11	CONDUCTOR,CHIP	0		
R509	1-218-990-11	CONDUCTOR,CHIP	0		
R510	1-218-950-11	RES,CHIP	560	5%	1/16W
R512	1-218-990-11	CONDUCTOR,CHIP	0		
R513	1-218-990-11	CONDUCTOR,CHIP	0		
R514	1-218-990-11	CONDUCTOR,CHIP	0		
R516	1-218-990-11	CONDUCTOR,CHIP	0		
R517	1-218-990-11	CONDUCTOR,CHIP	0		
R521	1-218-990-11	CONDUCTOR,CHIP	0		
R524	1-218-990-11	CONDUCTOR,CHIP	0		
R525	1-218-990-11	CONDUCTOR,CHIP	0		
R526	1-218-990-11	CONDUCTOR,CHIP	0		
R532	1-208-913-81	RES,CHIP	12K	0.50%	1/16W
R533	1-218-990-11	CONDUCTOR,CHIP	0		
R535	1-208-913-81	RES,CHIP	12K	0.50%	1/16W
R536	1-218-990-11	CONDUCTOR,CHIP	0		
R538	1-208-857-81	RES,CHIP	56	0.50%	1/16W
R539	1-208-857-81	RES,CHIP	56	0.50%	1/16W
R540	1-208-911-81	RES,CHIP	10K	0.50%	1/16W
R541	1-208-857-81	RES,CHIP	56	0.50%	1/16W
R542	1-208-911-81	RES,CHIP	10K	0.50%	1/16W
R543	1-208-857-81	RES,CHIP	56	0.50%	1/16W
R602	1-218-985-11	RES,CHIP	470K	5%	1/16W
R603	1-218-977-11	RES,CHIP	100K	5%	1/16W
R604	1-218-977-11	RES,CHIP	100K	5%	1/16W
R605	1-218-977-11	RES,CHIP	100K	5%	1/16W
R606	1-218-977-11	RES,CHIP	100K	5%	1/16W
R607	1-218-953-11	RES,CHIP	1K	5%	1/16W
R608	1-218-977-11	RES,CHIP	100K	5%	1/16W
R609	1-218-977-11	RES,CHIP	100K	5%	1/16W
R610	1-218-985-11	RES,CHIP	470K	5%	1/16W
R611	1-218-977-11	RES,CHIP	100K	5%	1/16W
R613	1-218-977-11	RES,CHIP	100K	5%	1/16W
R614	1-218-977-11	RES,CHIP	100K	5%	1/16W
R615	1-218-977-11	RES,CHIP	100K	5%	1/16W
R616	1-218-977-11	RES,CHIP	100K	5%	1/16W
R701	1-218-985-11	RES,CHIP	470K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R703	1-218-973-11	RES,CHIP	47K	5%	1/16W
R704	1-218-973-11	RES,CHIP	47K	5%	1/16W
R705	1-218-977-11	RES,CHIP	100K	5%	1/16W
R706	1-218-965-11	RES,CHIP	10K	5%	1/16W
R707	1-218-958-11	RES,CHIP	2.7K	5%	1/16W
R708	1-218-990-11	CONDUCTOR,CHIP	0		
R709	1-218-989-11	RES,CHIP	1M	5%	1/16W
R710	1-218-977-11	RES,CHIP	100K	5%	1/16W
R711	1-218-977-11	RES,CHIP	100K	5%	1/16W
R712	1-218-977-11	RES,CHIP	100K	5%	1/16W
R715	1-218-977-11	RES,CHIP	100K	5%	1/16W
R716	1-218-953-11	RES,CHIP	1K	5%	1/16W
R717	1-218-953-11	RES,CHIP	1K	5%	1/16W
R718	1-218-953-11	RES,CHIP	1K	5%	1/16W
R719	1-218-989-11	RES,CHIP	1M	5%	1/16W
R720	1-218-989-11	RES,CHIP	1M	5%	1/16W
R721	1-218-989-11	RES,CHIP	1M	5%	1/16W
R722	1-218-953-11	RES,CHIP	1K	5%	1/16W
R723	1-218-973-11	RES,CHIP	47K	5%	1/16W
R726	1-218-977-11	RES,CHIP	100K	5%	1/16W
R728	1-218-977-11	RES,CHIP	100K	5%	1/16W
R729	1-218-949-11	RES,CHIP	470	5%	1/16W
R734	1-218-990-11	CONDUCTOR,CHIP	0		
R736	1-218-990-11	CONDUCTOR,CHIP	0		
R737	1-218-973-11	RES,CHIP	47K	5%	1/16W
R739	1-218-953-11	RES,CHIP	1K	5%	1/16W
R741	1-218-990-11	CONDUCTOR,CHIP	0		
R798	1-218-977-11	RES,CHIP	100K	5%	1/16W
R799	1-218-990-11	CONDUCTOR,CHIP	0		
R803	1-220-882-81	RES,CHIP	33	0.50%	1/16W
R804	1-220-881-81	RES,CHIP	30	0.50%	1/16W
R805	1-220-881-81	RES,CHIP	30	0.50%	1/16W
R806	1-220-882-81	RES,CHIP	33	0.50%	1/16W
R807	1-220-881-81	RES,CHIP	30	0.50%	1/16W
R808	1-220-882-81	RES,CHIP	33	0.50%	1/16W
R809	1-218-935-11	RES,CHIP	33	5%	1/16W
R810	1-220-802-11	RES,CHIP	3.3	5%	1/16W
R811	1-220-802-11	RES,CHIP	3.3	5%	1/16W
R812	1-220-802-11	RES,CHIP	3.3	5%	1/16W
R954	1-218-990-11	CONDUCTOR,CHIP	0		
		< VARISTOR >			
VDR801	1-801-925-21	VARISTOR,CHIP			
VDR802	1-801-925-21	VARISTOR,CHIP			
VDR803	1-801-925-21	VARISTOR,CHIP			
VDR804	1-801-864-21	VARISTOR,CHIP			
VDR805	1-801-925-21	VARISTOR,CHIP			
VDR806	1-801-925-21	VARISTOR,CHIP			
VDR807	1-801-925-21	VARISTOR,CHIP			
VDR808	1-801-862-11	VARISTOR,CHIP			
VDR809	1-801-862-11	VARISTOR,CHIP			
VDR810	1-801-862-11	VARISTOR,CHIP			
VDR811	1-801-862-11	VARISTOR,CHIP			
		< VIBRATOR >			
X101	1-781-304-41	VIBRATOR,CRYATAL (40.500000MHz)			
X401	1-781-180-21	OSCILLATOR(13.5MHz)			
X501	1-579-922-11	VIBRATOR,CRYATAL(24.576MHz)			
X601	1-760-655-41	VIBRATOR,CRYATAL(20MHz)			
X701	1-767-450-11	VIBRATOR,CRYATAL(20MHz)			

Ref. No.	Part No.	Description			Remarks
	A-8056-556-A	JK-02 BOARD,COMPLETE			
		**********			
		< CONNECTOR >			
CN893	1-568-953-11	PIN,CONNECTOR 4P			
		< JACK >			
J881	1-565-276-31	JACK,ULTRA SMALL 1P(LANC)			
	A-8054-858-A	SWX-22 BOARD,COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C902	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
		< CONNECTOR >			
* CN901	1-764-895-21	SOCKET CONNECTOR 10P			
		< DIODE >			
D901	8-719-991-27	DIODE CL-170G-CD-T			
D902	8-719-027-84	DIODE CL-155UR/G-DT(PROTECT)			
D903	8-719-029-45	DIODE CL-155SD/G-D-T			
		< JUMPER RESISTOR >			
JR901	1-216-296-91	CONDUCTOR,CHIP	0		
JR902	1-216-295-91	CONDUCTOR,CHIP	0		
JR903	1-216-296-91	CONDUCTOR,CHIP	0		
JR904	1-216-296-91	CONDUCTOR,CHIP	0		
JR905	1-216-296-91	CONDUCTOR,CHIP	0		
JR906	1-216-296-91	CONDUCTOR,CHIP	0		
JR907	1-216-296-91	CONDUCTOR,CHIP	0		
JR908	1-216-296-91	CONDUCTOR,CHIP	0		
JR909	1-216-295-91	CONDUCTOR,CHIP	0		
JR910	1-216-296-91	CONDUCTOR,CHIP	0		
JR911	1-216-296-91	CONDUCTOR,CHIP	0		
		< RESISTOR >			
R901	1-216-031-00	RES,CHIP	180	5%	1/10W
R902	1-216-029-00	RES,CHIP	150	5%	1/10W
R903	1-216-073-00	RES,CHIP	10K	5%	1/10W
R905	1-216-073-00	RES,CHIP	10K	5%	1/10W
R906	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R908	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R912	1-216-029-00	RES,CHIP	150	5%	1/10W
R914	1-216-029-00	RES,CHIP	150	5%	1/10W
		< SWITCH >			
S901	1-762-366-11	SWITCH,TACTILE(POWER)			
S902	1-762-366-11	SWITCH,TACTILE(ANALOG IN)			
S905	1-762-366-11	SWITCH,TACTILE(DV IN)			

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS **********	
6	1-790-197-11	FFC (IF-SW)	
		ACCESSORIES & PACKING MATERIALS **********	
⚠	1-467-510-31	ADAPTOR,AC (AC-MZ60A)	
	1-574-316-11	CORD,CONNECTION (LANC CABLE)(2m)	
	1-690-852-11	CORD (WITH CONNECTOR) (AV CABLE)(1.5m)	
	1-777-360-21	CORD,CONNECTION (S VIDEO CABLE)(1.5m)	
	1-790-930-11	CORD,CONNECTION (DV CABLE)(2m)	
	3-868-211-11	MANUAL INSTRUCTION (ENGLISH/FRENCH)	

Note : **The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.** **Replace only with part number specified.**	**Note :** **Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.** **Ne les remplacer que par une pièce portant le numéro spécifié.**